The National
Future Farmer
Owned and Published by the Future Farmers of America

A Salute to Dr. W. T. Spanton,
Retiring National FFA Advisor

October-November, 1961

Two better answers to moving loads and folks... by INTERNATIONAL

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Use the nimble, low-cost SCOUT as (1) a 5-ft. pickup with your choice of steel or soft cab top, (2) fully enclosed for all-weather protection with full-length hard or soft top, (3) a convertible with top removed, (4) a "handyman" with doors off, windshield down.

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ALL HONOR TO A DEDICATED MAN

It isn't every day we are privileged to pay tribute to an esteemed friend and colleague, but it is our pleasure now to pay just such a tribute to none other than Dr. W. T. Spanton—"Mr. FFA himself," or as his host of friends know him, just plain "Bill."

With the help of Doctor Spanton's dedicated and inspiring leadership, the FFA today is a flourishing organization comprising a forward-looking membership of some 378,000 young men. He was—and, in retiring, *is*—singularly devoted to the welfare and achievements of that membership, so representative of America and its finest heritage and traditions.

With 37 vigorous and constructive years of unstinting service to agriculture, Dr. Spanton's retirement is assuredly richly deserved. And we who are proud to call him a treasured friend wish him all the best on this occasion and in the years ahead.

Raymond C. Firestone.

THE FIRESTONE TIRE & RUBBER COMPANY

ADVERTISERS INDEX

APPAREL & HOBBIES

Remington Arms Company 6
Future Farmers Supply Service 10
O. F. Mossberg & Sons 18
Levi Strauss & Company 34
H. D. Lee Company 40
Wolverine Shoe & Tanning Corporation 53, 57
Animal Trap Company of America 54
Tandy Leather Company 56
Havahart 57
Frank A. Hoppe, Inc. 57

FARM EQUIPMENT

McCulloch Corporation 8
Mid-States Steel & Wire Company 18
Deere & Company 19
The Oliver Corporation 35
Motec Industries, Inc. 45
Buckner Manufacturing Company 55
Allis-Chalmers 60

FEED & SUPPLIES

Ralston Purina Company 5
Pennsalt Chemicals Corporation 10
Smith-Douglass Company 13
MoorMan's 14, 31
Du Pont 15
Elanco Products Company 41
Nitrogen Division-Allied Chemical Corporation 47
Funk Bros. Seed Company 48
Oyster Shell Products Company 54

GENERAL

United States Army 9
Gold Medal Products Company 14
J. H. Schuler Company 44
The National FUTURE FARMER 44
Heart of Dixie Products 49
Commercial Credit Equipment Corp. 52
Consumers Cooperative Association 53
National Milk Producers Federation 55
Bob Jones University 59

LIVESTOCK

American Guernsey Cattle Club 48
American Hereford Association 51
American Royal 52
American Cheviot Sheep Society 54
American Hampshire Sheep Assn. 56
Beery School of Horsemanship 56
American Angus Association 56

TRANSPORTATION & TRAVEL

International Trucks 2
Firestone Tire & Rubber Company 3
Texaco 7
Goodyear Tire & Rubber Company 11
Santa Fe Railroad 12
Kendall Refining Company 16
Ford Motor Company 17
Harley-Davidson 33
Perfect Circle Corporation 37
Union Pacific Railroad 39
The B. F. Goodrich Company 43
Humble Oil & Refining Company 52
Congress of Motor Hotels 57

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EDITORIAL CONTENTS

About the FFA

NVATA Executive Secretary .. 12
Here by the Owl 14
RB-47 Flier to National Convention 16
Your Jacket Is Showing 16
National Convention 18
Here by the Owl for 20 Years 20, 21, 22
Eighteen and On His Way ... 25
Calf Scramble 28
How to Grow a Whopping Crop of Tomatoes 30
A Buyer + A Seller = A Market 36
Success with Seedlings 46
You Will Be There 48-49
Case of the Missing Camera .. 56
Money, Management and a Mission 26-27

Features

Cartoon Contest Winners 12
New Developments in Ag Research 29
Looking for Fun 51
She's a 37,832 Liter Cow 53
Mystery of Migrating Birds.. 54-55
History of the Breed 57

Departments

Your Editors Say 6
Reader Roundup 8
Looking Ahead 10
Photo Roundup 32
Free for You 53
Something New 54

Sports and Fiction

A Record for Mike 38
Sportrait 52
Father Knows Best About Guns 50

OUR COVER—Wherever Future Farmers meet, the owl is symbolic of the FFA Advisor. It is the "time honored emblem of knowledge and wisdom." Dr. W. T. Spanton, retiring National FFA Advisor, has provided an abundance of both in twenty years of service. Pages 20, 21, 22.

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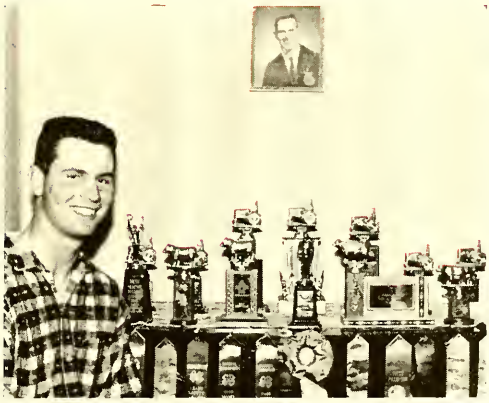
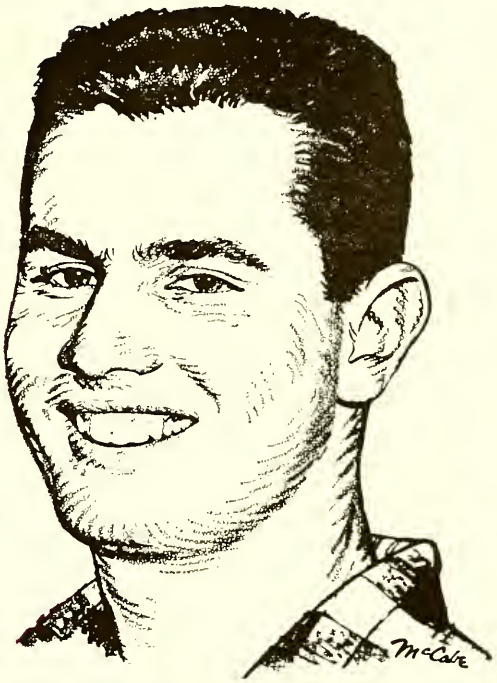
PURINA SALUTES ANOTHER "FARMER OF TOMORROW"



James McMechan displays his trophies and a few of the ribbons he has earned in 4-H and FFA.



"Farming is a good business"

—says American Farmer-Star Farmer

James McMechan, of Liberty, Indiana, can be called a "Farmer of Tomorrow" only because most of his future is ahead of him. Actually, he is a farmer of today. As a partner with his father, in the grain and livestock area on the eastern border of his state, he will market about 1200 hogs a year. He sees a challenge and a good future in farming.

James' success in farm projects began with his 4-H Club and Future Farmer of America activities. For nine years he carried an average of seven projects, won two Grand Championships and a Reserve Grand Championship in Union County. His ribbons, mostly blue, number around 75.

His achievements and leadership have earned local, state and national honors. Among other offices, he has been president of the local 4-H, president of the Junior Leaders, president of his FFA Chapter, president of the District FFA and president of his group at Purdue's short course. He was chosen Star Farmer in 1958 and American Farmer in 1960.

Purina salutes James McMechan on his leadership and achievements . . . on his well-planned future in agriculture.

* * * * *

There's a Purina Dealer near you. He is ready to help you with livestock and poultry feeding and management, whether you are interested in producing for market or the show ring.

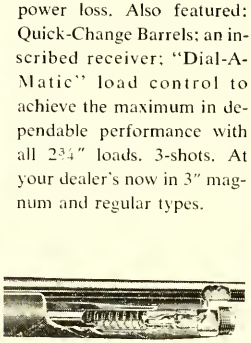
To Dr. W. T. Spantan, one of the founders of Future Farmers of America, Ralston Purina Company extends best wishes for a long and happy retirement. America owes a debt of gratitude to Doctor Spantan for his contributions to agricultural progress through his 33 years of service to Future Farmers of America.

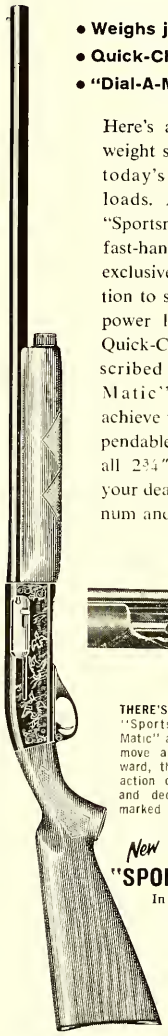
FEED PURINA...YOU CAN DEPEND ON THE CHECKERBOARD FOR

New featherweight autoloading shotgun with exclusive "Power-Matic" action

- Weighs just 7 lbs.
- Quick-Change Barrels
- "Dial-A-Matic" load control

Here's a top-grade featherweight shotgun designed for today's powerful sporting loads. Although the new "Sportsman" 58 weighs but 7 fast-handling pounds, it offers exclusive "Power-Matic" action to soften recoil without power loss. Also featured: Quick-Change Barrels; an inscribed receiver; "Dial-A-Matic" load control to achieve the maximum in dependable performance with all 2¾" loads. 3-shots. At your dealer's now in 3" magnum and regular types.





THERE'S LESS RECOIL with the "Sportsman" 58's "Power-Matic" action. As waste gases move a special piston rearward, there is a forward reaction on the gun, opposing and decreasing recoil to a marked degree.

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Your Editors Say . . .

NOVEMBER 1 marks the retirement of Dr. W. T. Spanton, National Advisor of the FFA. His has been a long and distinguished career —spanning the growth and development of vocational agriculture in rural high schools. It covers the period when the FFA evolved from the idea into an organization for farm boys unequaled in the world. Though Dr. Spanton would be the first to credit his predecessors and co-workers, his wise council and stable guidance were major contributions to vocational agriculture and the FFA during this period.

In recent years, Dr. Spanton has been a man of many titles. Those best known to FFA members include National FFA Advisor; Director of the Agricultural Education Branch, Department of Health, Education, and Welfare; and President of the Future Farmers of America Foundation, Inc. For him, these have been opportunities for service to farm youth, agriculture, and education.

This issue pays special tribute to Dr. Spanton on the eve of his retirement. It's a way of saying, "Thanks, Chief, for a job well done." We hope it speaks for all present and former FFA members, teachers of agriculture, state office staffs, and our friends in business and industry—all those who have come under the influence of his leadership.

This is the season when the air is filled with a great deal of anticipation for FFA members. The National Convention is just a few days away—and with it will come a new slate of national officers, a new Star Farmer of America, and new award winners in national FFA contests. It has a touch of melancholy too, as those who have carried the honors and responsibilities of their posts so well during the past year turn them over to a new crop of Future Farmers.

Fortunate indeed is the FFA member who attends a National FFA Convention. He is in for a real treat. It's fun, but more important, it broadens the leadership experience as few other activities can. And he has responsibilities, too. He owes it to himself to get the most out of this educational expericene. And he owes something to the people back home—parents, FFA advisor, fellow chapter members. They will want to hear about the trip so any delegate should be prepared to tell them about the important details upon his return. And a great challenge to all is to bring back ideas that will add zest to chapter activities. Ideas and some of the enthusiasm prevailing in Kansas City for agriculture and FFA can breathe new life into your chapter.

As we go to press, an alarming statement hit my desk from Sterling M. McMurrin, U. S. Commissioner of Education. It says in part, "Two and one-half million of the 10,800,000 students to be enrolled in grades 9 through 12 of the Nation's public and non-public schools this fall will drop out before graduation."

This is a tragic waste of our human resources and one that not only affects the country as a whole but cuts the earning power of the individual student later in life. It is a pitfall to be avoided by Future Farmers as modern farming requires technical know-how and managerial ability developed through education. Stay in school and you won't be one of those to make the statement I have heard so often, "If only I hadn't quit school when . . ."

Wilson Carnes

Editor

HIS PORTABLE HOG CRATE MAKES PICK-UPS EASY!

This one-man portable hog crate "invention" saves time and labor for Mr. George Hill, who farms 180 acres near Manly, Iowa. It enables him to round up and cage stray hogs, including litters, in the field. They are then hauled quickly to the road, where the tractor's hydraulic control easily lifts the crate to a waiting truck.

After five years of using Texaco Products to lubricate and fuel his tractors and other farm equipment, Mr. Hill is convinced they are best for economical operation and longer machinery life. He prefers Advanced Custom-Made Havoline Motor Oil, for example, because it wear-proofs engines and cleans as it lubricates. He also uses Texaco Marfak lubricant, because it sticks to open bearings better. Like farmers all over the country, this progressive farmer has found that it pays to farm with Texaco Products.

SHOWN IN PHOTO *(left to right) are Mr. Hill and Texaco Consignee M. L. "John" Benn, of Mason City, Iowa, who provides neighborly, on-time deliveries to his customers.*

IT'S TEXACO FOR HIM!

Mr. Bruce O. Nicholes, who grows 150 carloads of potatoes annually on his 500-acre farm near Madras, Oregon, likes the lively power of Fire Chief gasoline for his 5 tractors. Fire Chief is Climate-Controlled, specially blended to match year-'round temperature changes. As a result, engines run more efficiently with this great gasoline, saving farmers money on fuel. Photo shows Mr. Nicholes (with dog) passing the time of day with Texaco Consignee J. Newell Dana, of Madras, Oregon.

BUY THE BEST..BUY TEXACO

TUNE IN TO THE HUNTLEY-BRINKLEY REPORT, MONDAY THROUGH FRIDAY, NBC-TV

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DIGS HOLES

MAKES MONEY

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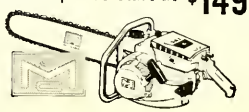

Floodwood, Minnesota

I am very disgusted with *The National Future Farmer*. It's not that I don't like the Magazine, but because I get it only every other month. I wish I could get it two times a month. I like the Magazine very much.

Pete Vander Veir

Lepanto, Arkansas

I enjoyed the article, "How Do You Shape Up Physically," in the August-September issue. I wish all America could read it.

Jerry Spencer

Cooper, Texas

Please send me the booklets I have circled. I enjoyed the story, "Lady Has Her Day," in the August-September issue. I would be willing to pay more to receive the Magazine more often.

Moncel Clark

West Wellington, Connecticut

Please send the booklets I have checked. I plan to use them in my class work when I return to school for my junior year. Thanking you in advance.

Gilbert T. Farrington

Ringling, Oklahoma

I must congratulate you on what I believe to be the best issue yet (August-September). I truly enjoyed reading "Lady Has Her Day." I like all stories about the mysteries and peculiarities of animals.

Jerry Cathey

Thanks for the bouquet, Jerry. We hope we can do even better. And as for "Lady," she evidently made lots of friends. We have received a great many letters mentioning her name.—Ed.

Hillsboro, Missouri

I have just received the August-September issue of *The National Future Farmer* and would like to congratulate you. It is a well rounded Magazine with a variety of articles ranging from Mickey Mantle to the report of our National Vice-Presidents. I, too, would favor more issues at a higher price.

William A. (Bill) Atwood

Eagle, Idaho

I am a member of the Meridian, Idaho, FFA and I have received many useful ideas from *The National Future Farmer* and my vo-ag courses. I am very much interested in conservation and think everyone should be. This is why I want the leaflet on conservation (August-September issue). I also would enjoy having the Magazine more often for the higher price.

Ray Armstrong

Utica, Mississippi

My goal is to try to be a farmer and a veterinarian. I have read and learned from many good stories in *The National Future Farmer*. Keep up the good work.

Tommy Chapman

Munday, West Virginia

Please send me the booklets I have circled. I would like to get *The National Future Farmer* each month and would be willing to pay more.

Bill De Weese

Van Buren, Arkansas

Please send me the free booklets I have circled. These are always helpful. The members of the Van Buren Chapter think *The National Future Farmer* should be published every month. Price doesn't matter.

Gary Baxter

Eleva, Wisconsin

Congratulations on your excellent magazine. I especially enjoyed the August-September issue. The material is very interesting. Wish it was published more often. Please send the booklets I have circled.

Duane R. Becker

Frenchburg, Kentucky

Just a short personal note to say the August-September issue of *The National Future Farmer* is one of the finer examples of all-around good general coverage your staff has produced. You hit farming, leadership and brotherhood all in a dynamic sort of way—that's a tough assignment for one issue—much less to do it well.

Good work.

Jerry F. Ringo
FFA Vice President, 1956-57

Martinsville, Indiana

Please enter our subscription to *The National Future Farmer Magazine* for two years.

As stated in the editorial section we, too, would appreciate more issues per year if the articles do not lose their quality.

Note we are not vo-ag students nor FFA members. Just potential farmers—maybe? This is the best magazine we have ever seen and the most informative with up-to-date honest information that we need and are looking for.

Mr. & Mrs. Richard Northern

Wetumka, Oklahoma

Please send me the booklets which I have checked. I will place them in our Chapter library.

This is my second year as an FFA member. I am chairman of the Scholarship Committee of our Chapter.

I enjoy *The National Future Farmer* very much.

Lenzie Anderson

CHOOSE YOUR JOB TRAINING COURSE – BEFORE YOU ENLIST

Exciting work—if you can get it. To land a job in the Missile field, you need training. The kind of training you get through the Army Graduate Specialist Program.

Only high school graduates are eligible to apply. If you qualify (by passing aptitude and physical examinations), this program lets you choose your job training course before you enlist.

You can select from 107 different courses. Guided Missile Electronics is one possibility. There's also Radar Repair, Track Vehicle Maintenance, Personnel Administration, Engineer Equipment Maintenance, Medical Laboratory—to name a few. (Your Army recruiter can give you a detailed description of any specific Graduate Specialist course.)

Army school courses are practical. You learn by doing. The job training you absorb can pay off for the rest of your life.

If you meet the qualifications, you receive an official letter guaranteeing your assignment to the Graduate Specialist course you've chosen. You receive the letter before you enlist. Without obligation.

GRADUATE SPECIALIST PROGRAM

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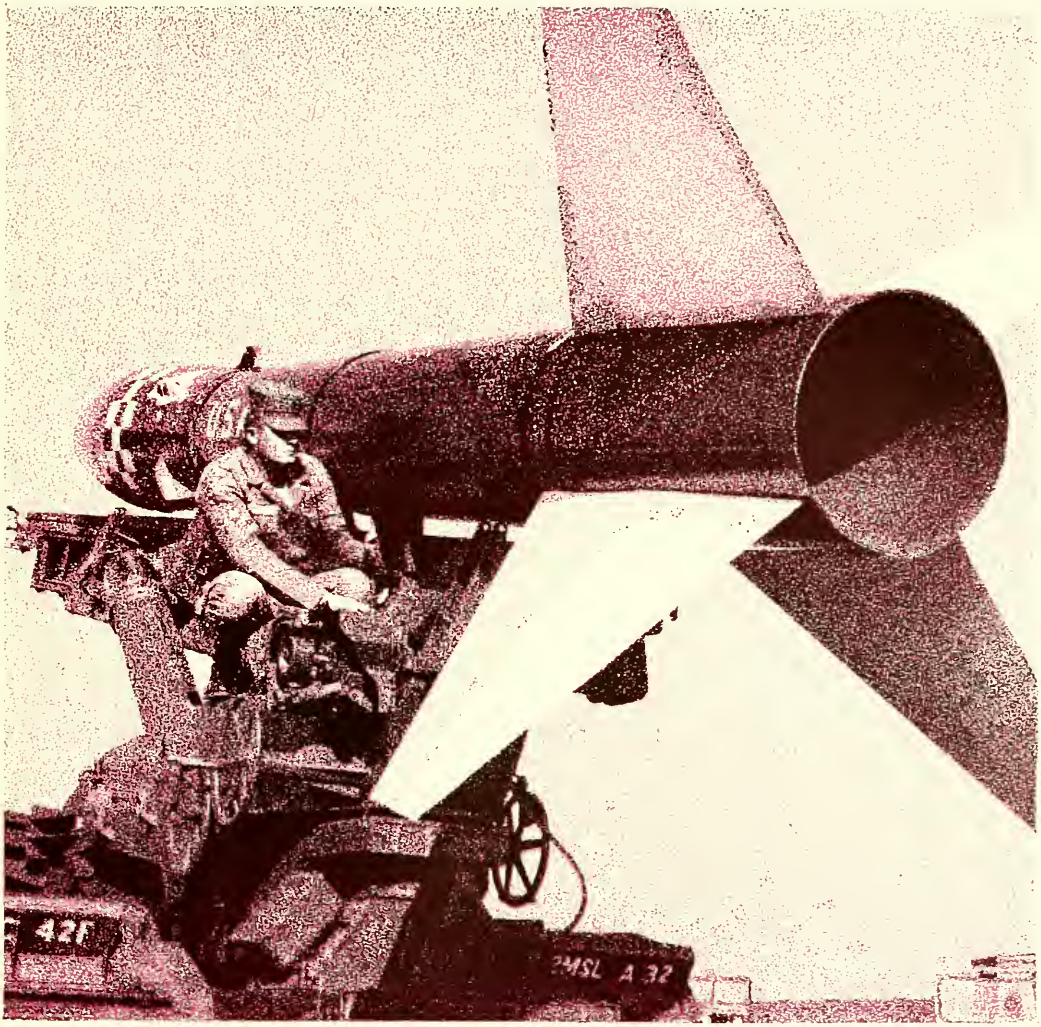

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Looking Ahead

MORE RED MEAT IN STORE

Pig, calf, and lamb crops—all are up this year. That's the word from the USDA. If hog producers carry out plans, the pig crop will be five percent larger than 1960. Both calf and lamb crops are expected to be one percent above 1960 and 1950-59 average.

AN EASE-UP IN DROUGHT

Rains in some areas of the Great Plains have been a god send. One conservation farmer reported to the Great Plains Agricultural Council: "All of us in this part of the country are hurt to some extent. But that extra grass and those 50 stacks of hay I kept over are saving my business this year."

TWELVE COWS IN ONE

History's first 300,000-pound milk producer has been announced by the Holstein-Friesian Association of America. Zeldenrust Pontiac Korndyke, 15 years old, still milking heavy on the Ray Bottema farm, Zionsville, Indiana. She's produced 12 times the output of average cows.

WATERMELONS ON A BUSH

H. C. Mohr, of Texas A & M College, has developed a new bush-type watermelon that requires only a six-square-foot area. Seed is yet to be released to growers.

NEW SHEEP TEST STATION

First came hog and cattle testing stations—now sheep. A unit being put in operation by the University of Kentucky will collect information on gain, feed efficiency, carcass quality, and other factors.

CORN OF THE FUTURE

You may not recognize tomorrow's corn! D. E. Alexander, Illinois specialist, says that 15 to 20 years from now we may be growing up to 24,000 stalks per acre. High-oil versions could mean more livestock feed from each bushel and teosinte may pave the way to multiple-eared combinations. Teosinte is a wild relative of corn.

A LOOK UNDERNEATH

Carcass steer judging will be introduced to the Southwest at Fort Worth's 1962 Southwestern Exposition and Fat Stock Show. Judges will look for the kind of carcass in demand by all segments of the beef industry.

DOLLAR CORN THIS YEAR

Purdue University economists are forecasting $1 corn at harvest. Soybeans, they say, will bring slightly below the loan rate of $2.30 a bushel. Soybean acreage is an all-time high. The 27.1 million acres intended for harvest is 15 percent above last year; 13 percent over 1958.

FROM BROILERS TO CATTLE

Charles Vantress, Georgia geneticist, is working with James McGregor, Angus breeder, to develop cattle with faster growth and better feed conversion. Vantress breeding is well-known in the broiler industry.

WEED KILLERS IN NEW ROLE

Illinois tests show 2, 4-D and similar chemicals may some day be used to boost crop yields. Minute amounts used as growth stimulators, increased yields of the common bean more than 10 percent. The amount left in a spray can, after it is washed, is more than enough to treat one acre.

PLENTY OF GOBBLERS

About 25 percent more pounds of turky meat than last year will be available for this year's Thanksgiving-Christmas season. This nearly parallels a 26 percent increase in poults hatched the first five months of this year. Sizeable expansion in broiler production, too, has boosted marketings. This has meant poor returns to producers in recent month

Goodyear salutes Dr. W. T. Spanton

...*pioneer in scientific farming*

A lot of "future farmers" have blossomed into the respected names in present-day agriculture since Dr. Spanton helped found the Future Farmers of America more than 30 years ago.

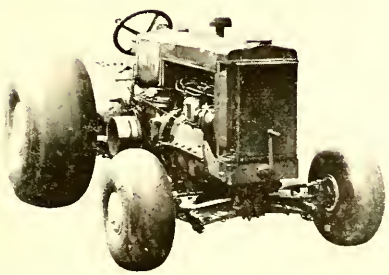
They're quick to tell you of the contributions he and his great organization made to their success. And how he has always worked to advance the art of efficient scientific farming.

Goodyear, too, appreciates these efforts — the more because his aims have been ours as well.

About the same time Dr. Spanton launched his distinguished Future Farmer career, Goodyear development men went to work on the first pneumatic tractor tire. Their inspiration: a Florida farmer's ingenious use of borrowed aircraft tires to give the tractor shown here some traction in soft going.

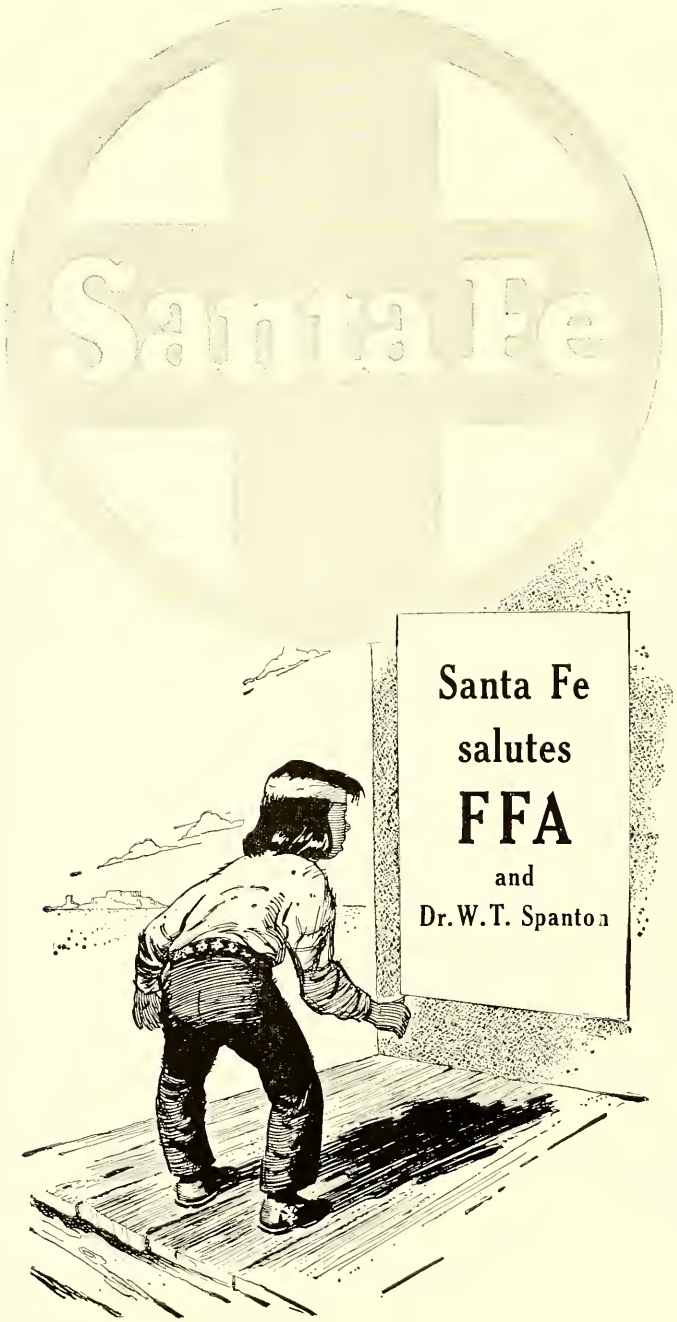
In short order came tires which multiplied — many times over — the farm tractor's usefulness.

Once again, then, we salute Dr. Spanton, fellow pioneer in scientific farming. We want to add our thank you for his years of service and to wish him many happy retirement years ahead.



GOODYEAR

MORE FARMERS PREFER GOODYEAR TRACTOR TIRES THAN ANY OTHER KIND



FFA Advisor Is NVATA Executive Secretary

James Wall, formerly FFA Advisor at Waverly, Nebraska, has taken over as full-time executive secretary of the National Vocational Agricultural Teachers' Association. His office at Lincoln, Nebraska, is located only a few miles from where he taught vocational agriculture for 15 years.

FFA members at Waverly presented Mr. Wall a new set of luggage and his wife a musical jewel case in appreciation of their many years of service. Dennis Swanstrom, Nebraska FFA Association President and former Waverly Chapter President, made the presentation. Mr. Wall took over his new duties July 1.

Under Mr. Wall's supervision, the Waverly Chapter has won five Gold Emblem awards. He holds both state and national honorary degrees in the FFA.

Cartoon Contest Winners

HERE ARE the winners of the Cartoon Caption Contest which appeared in the August-September issue. In some cases more than one reader sent in the same caption, so the judges picked the ones with the earliest postmark.

First Prize, $15

"Radar Operation is one possibility"—Stanley Kent Pierce, Trafalgar, Indiana

Second Prize, $10

"Like having four vehicles for the price of one"—Daleen Walker, Marsing, Idaho

Third Prize, $5

"That way, you'll kill it the newest, easiest way possible . . ."—Duane L. Starr, Ridgeville, Indiana

Honorable Mention, binders for copies of *The National FUTURE FARMER.*

"See this sturdy little workhorse"—Darrel Dalton, Piggott, Arkansas

"Guaranteed by Good Housekeeping"—Clayton Brown, Shelbyville, Tennessee

"Have never been copied successfully!"—Bill Jankowski, Tower, Minnesota

"A little extra money-maker"—Dixie Crews, Dora, Alabama

"Helps put more eggs in your basket"—Ray Owen, Emerson, Arkansas

SMITH DOUGLASS

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OF A SERIES

Check yourself on the following question. Don't be surprised if you miss. Fertilizers are a rapidly changing part of this business of farming.

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Expensive? Not at all. Your investment in TREL is a few cents an acre.

Have you ever wondered what the limiting factor was in that rare year when everything seemed to be just right—weather included? It might have been a trace element deficiency. Why take the chance? Use Smith-Douglass Fertilizer with TREL every year.

S-D FUTURE FARMER OF THE MONTH

Maurice Chappell Hendrick
Bluestone Chapter, Clarksville, Va.

Maurice is attending Virginia Polytechnic Institute, with the assistance of a Smith-Douglass scholarship. He served as president of his FFA chapter, attended a National FFA Convention in Kansas City, and plans to enter some phase of Agricultural Engineering upon graduation from college.

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Smith-Douglass Co., Inc., manufactures and distributes fertilizers and chemicals for agricultural and industrial use, including sulphuric acid, anhydrous ammania, phospharic acid, nitragenous tankage, phasphate rock, superphasphate, farm fertilizers, lawn and garden fertilizers, feed phasphorus supplements . . . dicalcium phasphate and defluarinated phasphate . . . patassium silicofluoride and potassium fluobarate.

Well done Mr. FFA!

Our heartiest congratulations and best wishes to you, Dr. Spanton, upon your retirement. Your many and varied contributions to FFA, the FFA Foundation and to agriculture in general, merit the keenest admiration of everyone connected with agri-business. May your future be a healthy, happy one; full of good things for you and Mrs. Spanton. We salute you!

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Write today for Free booklet giving detailed approach to a Popcorn Operation for your school and information on all profitable refreshment items.

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1821-31 Freeman Ave., Cincinnati 14, Ohio

MR. ADVISOR:

"As a new member of the FFA, what am I expected to do in support of my chapter? Of State Association and National Organization?"

"Here by the Owl"

Virgil B. Cauley
Advisor
Brookville FFA
Lynchburg, Virginia

Harold Vance
Advisor
Fairbury FFA
Fairbury, Nebraska

WHEN YOU ENTER the FFA you are challenged as never before. It is quite appropriate that you should ask, "What am I expected to do in support of my chapter? Of state and national organizations?"

Study the FFA manual. Become familiar with the organization, what it is, what it does, and what it stands for. Then set your sights high.

Planning is important the first year. I have seen good students lose out on important phases of the FFA program because they did not start planning in the first year. Some of the high awards may seem completely out of your reach, but those who reach the top are those who set goals early and make plans to reach those goals.

American Farmers I have had the privilege of teaching set their goals high as Green Hands and had the determination to reach those goals.

In the FFA, every member has an opportunity to develop leadership to the extent of his ability. And leadership offers satisfaction and a means of improvement. I urge you to become a good leader.

New FFA members must learn to work cooperatively since teamwork is of primary importance in conducting a good FFA program.

New members should participate in all FFA contests, develop a good farming program, and work with older students in setting up a good chapter program of work. Many students have come to me the third or fourth year and said, "If I had only worked harder and participated in more activities my first year as an FFA member, I could have accomplished so much more."

So I say to you, take an active part in your chapter activities, set your goals high, and plan for the years ahead. You can earn chapter, state, and national awards if you are willing to sacrifice, work hard, and take advantage of your opportunities.

AS a new member in the FFA, you are called a Green Hand. You should be proud of that title. When we think of green we think of a live, or growing plant. In this case, Green Hand means a new Future Farmer who is growing in knowledge. He has met the requirements of FFA membership by learning the creed, and studying the purpose and program of work of the organization. He should feel honored to be elected a member by the other members of the chapter.

If you are to grow in the organization there are many activities in which you must participate. It is not what the organization can do for you that is most beneficial, but what *you* can do for the organization. You will find many chances to support chapter activities. I urge you to do the following:

1. Be regular in attendance at every Future Farmer activity.
2. Take part in each activity sponsored by the chapter.
3. Try to be the winner in the FFA creed speaking contest.
4. Be proud of your chapter. Remember it is part of a national organization.
5. Be a member that the other members will be proud of.
6. Study the Constitution and By-Laws and live by them.
7. Wear the Future Farmer jacket according to recommendations.
8. Learn about the FFA and what it stands for.
9. Strive for the highest goal in the FFA—the American Farmer Degree. The proudest moment of my teaching career came when I was awarded the Honorary American Farmer Degree at the 1960 National FFA Convention.
10. Do everything possible to promote Americanism through your chapter. Only in America is it possible to belong to as fine an organization as the Future Farmers of America. Make the most of that opportunity!

Dr. William T. Spanton

Salute
TO THE CHIEF
and His Many Helpers

This fall, Dr. William T. Spanton retires as Director of Agricultural Education in the U. S. Department of Health, Education and Welfare and as National Advisor to the Future Farmers of America. We salute him for a lifetime of devotion and service to the farm youth of our country.

We do this because he, personally, has been a pillar of wisdom and inspiration to a nationwide organization which helps mold the lives of countless farm boys and helps set them on paths of good citizenship and high ideals.

We do this also because, in saluting him, we also salute the hundreds—yes, thousands—of dedicated persons in education and industry who are partners in that endeavor. All have one thing in common. All share the unshakable belief that the youth of our country is its hope, its inspiration, its greatest asset.

Under Dr. Spanton's leadership and in his lifetime, the FFA has grown in strength and vigor to become one of the most worthy and constructive influences among our young people. His many faithful co-workers all share in this accomplishment, and they all share in the leadership he has provided. He has the rewarding satisfaction of knowing this will be true for many years to come.

DU PONT
REG U S PAT OFF

BETTER THINGS FOR BETTER LIVING
. . . *THROUGH CHEMISTRY*

Clark W. Davis

CLARK W. DAVIS, GENERAL MANAGER
INDUSTRIAL AND BIOCHEMICALS DEPARTMENT

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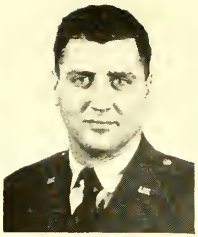


Capt. McKone

RB-47 Flier To Attend Convention

THE EXCITEMENT caused by the shooting down of an American RB-47 over the Barents Sea last year will be recalled at the 1961 National FFA Convention. Future Farmers will get to hear from Captain John R. McKone, one of the fliers, on Wednesday morning, October 11.

Captain McKone is a former Future Farmer himself. He studied vo-ag at the Tonganoxie, Kansas, Rural High School and was a member of the National FFA Band.

You may remember that two members of the RB-47 crew were released by the Russians early this year. The other was Captain Freeman B. Olmstead, also a Kansan.

The two men were kept in a Soviet prison where they were questioned repeatedly. They stayed in cells 15 by eight feet where lights were kept on 24 hours a day.

The release came suddenly, on January 25, 1961. After being returned to the United States, the fliers were met by President Kennedy.

Your Jacket Is Showing

THAT FFA JACKET you are wearing sets you apart. In the eyes of most people, you are not a run of the mill product. You represent a select specimen.

The name of your chapter is easily read by the passer-by. The golden letters on a blue field tell the world you belong to a great American organization. Your family name and your first name are there for all to admire—and everyone will if you deserve the honor your jacket is designated to convey.

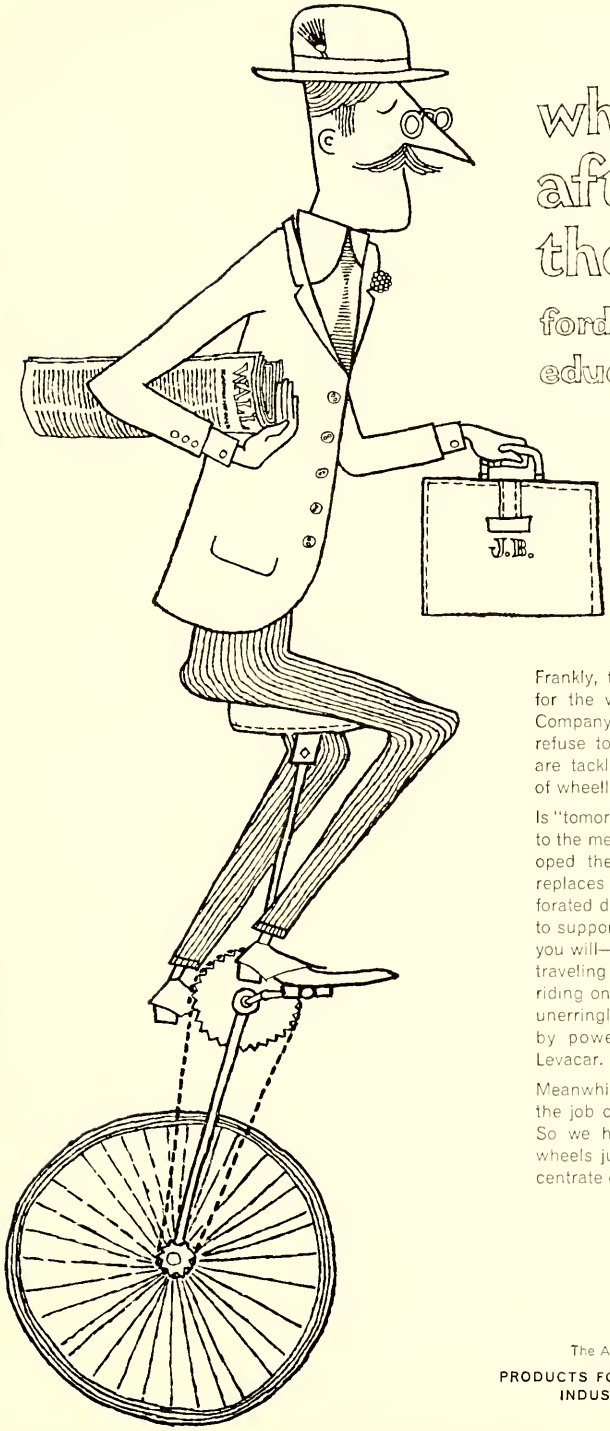
It is your obligation as an individual to conduct yourself in such a manner that you will not degrade the great agricultural group the jacket symbolizes. When you don this cloth, think of it as a soldier does the uniform he wears, the flag he carries, and the oath he has taken.

Your colors of blue and gold, the motif carried out in the design of your jacket, mark you as a young man chosen by your leaders to represent the best product of our modern agricultural society. So conduct yourself on the farm, in town, at conventions, any place you may go, in such a manner that this great emblem will be respected. People are watching you.

Will they admire and respect the young man in agriculture today who will be the leader in agriculture tomorrow? You control the verdict. Be careful—your jacket is showing!

—W. J. Tucker

You are always well-dressed in your blue and gold jacket—but, of course, you must wear it properly.



what comes after the wheel?

ford motor company's educated guess

Frankly, there is no practical substitute for the wheel today. But at Ford Motor Company, our scientists and engineers refuse to give "no" for an answer. They are tackling, among others, the problem of wheelless vehicles for tomorrow.

Is "tomorrow" really far off? Not according to the men at Ford. Already they've developed the Levacar as one possibility. It replaces the wheel with *levapads*, perforated discs which emit powerful air jets to support the vehicle. Air suspension—if you will—of an advanced degree. Imagine traveling swiftly, safely at up to 500 mph, riding on a tissue-thin film of air. Guided unerringly by a system of rails. Propelled by powerful turboprops. This is the Levacar.

Meanwhile we've still got the wheel. And the job of building better cars for today. So we hope you won't mind riding on wheels just a little longer while we concentrate on *both* tasks.

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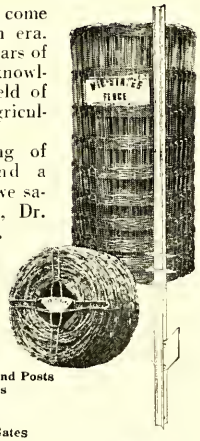
WHEN DR. SPANTON RETIRES

an era will come to an end—an era spanning 33 years of growth and knowledge in the field of vocational agriculture.
With a feeling of gratitude and a sense of loss, we salute Mr. FFA, Dr. W. T. Spanton.



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Mossberg for accuracy

Lyle Carpenter, who will preside at this year's National FFA Convention.

All Aboard For Kansas City

IT'S CONVENTION TIME! The FFA's national meeting is scheduled for October 10-13.

From Yuma, Colorado, comes this message about the 1961 event, part of the official "Convention Call," issued by Lyle Carpenter, your National FFA President: ". . . The thirty-fourth annual National Convention will be the highlight of our FFA year."

The national officers, along with national FFA office people in Washington, D. C., have been busy making plans for the big event. A host of speakers will appear during the three days jam-packed with activities. Again this year, the convention has been planned to embrace more of the American Royal Livestock and Horse Show.

1961 CONVENTION HIGH LIGHTS

TUESDAY, OCTOBER 10

A. M.	Early Registration
12:00 Noon	Officer-Delegate Luncheon
Afternoon	Early Registration Nominating Committee and Officer Candidate Meeting Committee Meetings Meeting of Ushers and Courtesy Corps Tours to Points of Interest Audition for FFA Talent
Evening	State Advisors Meeting Rehearse American Farmer Degree Ceremony Rehearse Star Farmer Program

WEDNESDAY, OCTOBER 11

9:00 A. M.	Registration Opening Session Address of Welcome—Mayor H. Roe Bartle Nomination of Honorary American Farmers Meats Judging Contest Capt. John R. McKone, RB 47 Flier
Afternoon 2:00 P. M.	Conferring of Honorary American Farmer Degrees Address—Doyle Conner, National FFA President—1948-49 American Farmer Degree Ceremony Donor Reception Poultry Judging Contest
Evening 7:30 P. M.	Introduction of Representatives of Donors to FFA Foundations, Inc. Recognition of 15-Year Donors Recognition of Past Star American Farmers Star American Farmer Ceremony 1961 "Four Star Farmers" Movie

THURSDAY, OCTOBER 12

9:00 A. M.	Business Session Buford Ellington, Tenn. Gov. Leadership Training Demonstration Farm Proficiency Awards Dr. George A. Selke, Assistant Secretary of Agriculture Live Stock Judging Contest
Afternoon 2:00 P. M.	Business Session Leadership Training Demonstration National Chapter Awards—
Evening 7:30 P. M.	National FFA Band Concert Recognition of Past Members of National FFA Band Recognition of Past National Public Speaking Winners Dr. Ernest V. Hollis, Office of Education National Gold Emblem Chapter Awards Ceremony National FFA Talent Show

FRIDAY, OCTOBER 13

9:00 A. M.	Business Session We Salute Our Foreign Guests Election of New National Officers
11:30 A. M.	Special Session—FFA Day at American Royal Live Stock and Horse Show—Royal Arena
Evening 7:30 P. M.	Special FFA Talent Show National Officers Night Recognition of Past National Officers Installation of 1961-62 National Officers Closing Ceremony Firestone Show

SATURDAY, OCTOBER 14

A. M.	Awards Breakfast for Judging Contestants and Officials American Royal Parade

Speaking for the Legions,

"Thank You, Dr. Spanton"

Their name is legion—these young men who wear and those who have worn, the blue and gold of FFA. They have aspired and attained under your mature guidance and sage counsel in the 33 years since the founding of FFA.

Honors have been many in those years, and you have worn them lightly, taking your greatest satisfaction from a job well done rather than in the acclaim that marks accomplishment.

With your example as heritage to guide the blue-jacketed legions that follow, and the educators who lead them, there can be no doubt as to the importance of free enterprise guided by native intelligence, and broadened by free education.

For that heritage of the past which is at once a bright promise for the future, we join the legions in a "Thank you, Dr. Spanton."

JOHN DEERE – MOLINE, ILLINOIS

JOHN DEERE

Dr. W. T. Spanton
National FFA Advisor

"Mr. National Advisor" and his first team of national FFA officers (1941).

HERE BY THE OWL

The 1961 national officers meet with Dr. Spanton in his Washington office.

A story of one man's service to the farm youth of America

WHY INVEST a life's work in farm boys of America? The answer from retiring National FFA Advisor, Dr. W. T. Spanton, would probably be . . . "It's a sound investment—you are sure to get men and you may get some great men . . . I did!"

This would be characteristic of the FFA's top leader . . . turning attention away from himself and directing it to the program of vocational agriculture and the Future Farmers of America organization he has served.

1941 National Convention in session, with Dr. Spanton barely visible at left. Conventions then were smaller.

OR 20 YEARS

From this log cabin in Kentucky, Dr. Spanton rose to the highest agricultural education post in the nation.

FOR MORE than 45 years, Dr. Spanton has been educating and advising young farmers, giving unselfishly of himself and his time. He started out as a school teacher in Ohio and worked his way up. For 20 years, he has been the Director of the Agricultural Education Branch of the U.S. Office of Education. That also marks his tenure as "Mr. Advisor" to every Future Farmer.

Quietly, Dr. Spanton has maintained his station by the FFA's "time-honored emblem of knowledge and wisdom"—the owl. And patiently he has watched outstanding young leaders work out the problems of a big organization. But when really big hurdles have arisen, he has been ready with advice, and he has advised wisely — firmly, too. Someone has figured that nearly two million Future Farmers have benefited from his 20 years as National FFA Advisor.

Born in a log cabin, Dr. Spanton, now is 70 years old. Of the small group of farm leaders that organized the FFA, he is the only member who is still active in FFA work. His labors and his pleasant relationships with all who have supported the FFA have earned him the friendship of thousands.

For more than 30 years, Dr. Spanton has been directly connected with the National FFA Convention held each fall in Kansas City. No doubt this fall's big meeting will include appropriate recognition. Those gathered will be speaking for tens of thousands who have attended previous conventions, and for many more thousands who are better farmers and better citizens for their vocational agriculture training and FFA work.

Doubtless, "Mr. National Advisor" will find the spotlight an unusual place. He has always insisted that major attention be given to FFA members.

No one has been closer to the FFA since its beginning. Under Dr. Spanton's guidance the FFA has grown into an organization of some 378,000 members, stretching from Maine to Hawaii, and from the state of Washington to Puerto Rico. The Future Farmers of America Foundation, Inc., which Dr. Spanton helped to establish, and of which he is President, now has more than 300 donors. It provides an annual program of awards that totaled $161,250 last year.

You can see that the man born in a log cabin has had no small job. Incidentally, he is very proud of the modest start. A photograph of the log cabin lies underneath the glass on his desk in Washington, D. C.

Shortly after his birth, near Independence, Kentucky, Dr. Spanton's parents moved to Ohio. He attended the Harrison Schools, and then Ohio State University. Later he did advanced work at Brown University in Rhode Island and American University in Washington, D. C. A Ph.D. was earned at the latter institution.

It was while at Ohio State that "Mr. National Advisor" met his guiding light. She was a secretary on the campus. Dr. Spanton was very fond of Hawaiian music at that time. He also liked canoeing. During courtship days, they would cruise down the Scioto River while he played Hawaiian music.

Fortunately, after they were married, a trip to Hawaii presented itself. Dr. and Mrs. Spanton took their son, Billy, along. The son, William F. Spanton, now is a lawyer in Wilmington, Delaware.

"Mr. National Advisor's" first job was as a teacher of agriculture and science in Ohio. He later held state supervisor posts in Rhode Island and Missouri. In 1925, he became a federal agent for agricultural education in the Pacific Region. That was the post he held until he took over his present duties in 1941.

Another highlight was when he made a trip to Mexico, along with two other specialists in Vocational Education. They spent several weeks assisting with the establishment of vocational education programs in agriculture.

Probably one of the most significant times in Dr. Spanton's career came when the building blocks were laid for the FFA. He was a regional agent then, and the late Dr. C. H. Lane was chief of the Agricultural Education Service.

In 1926, Dr. Lane went searching for a major livestock show where vocational agriculture students might have a division all their own. He found such a place at the American Royal in Kansas City. Thus began a relationship between two big agricultural events that has remained close to this day.

That fall, boys from 22 states showed

Three national advisors have guided the FFA—from left are Dr. Spanton, Dr. C. H. Lane, and John A. Linke.

Dr. Spanton and Mrs. Spanton at a recent tea given by close friends.

their animals. They also attended a national congress of vocational agriculture students. Dr. Spanton was one of the officials present.

So good were the results that a desire was sparked for a national farm boy organization. State groups already running smoothly included the Future Farmers of Virginia and a similar group in New Jersey.

One of the next big moves came in the spring of 1928. Speaking at a meeting in Denver, Colorado, Dr. Spanton said: "I cannot too heartily endorse the student organization idea."

Later, it was suggested that the name "Future Farmer" would be a catchy and appropriate title for each member and if a strong national organization could be established, what would be a more appropriate name than "FFA," or "Future Farmers of America?"

If you have studied the history of the FFA, you know what happened that fall. Following a meeting at which Dr. Spanton and several others drew up a temporary constitution, the first National FFA Convention was held in Kansas City's old Baltimore Hotel. Thirty-three official delegates represented 18 states.

It was a small gathering, compared to today's big convention, but it was a mighty important one. Dr. Spanton surely will be thinking about it, along with other high points in his career, as he turns to his new role.

All along, Dr. Spanton has been proud of the good record FFA members have compiled. Word goes out each year complimenting Future Farmers on past behaviour, yet cautioning on the importance of maintaining the high reputation.

The feeling of Kansas City toward Dr. Spanton and the FFA has been most cordial. In fact, a few years ago, businessmen chose to honor the National FFA Advisor at the 30th Anniversary of the National Convention. An impressive dinner was provided for Dr. and Mrs. Spanton. Would he take a gift, too? "No," came the answer.

"I appreciate what you fellows in Kansas City are doing," Dr. Spanton said, "but there can be no gift. Not a thing," he added, noting that he was an employee of the Federal government and would be until his retirement. So, there was a bouquet for Mrs. Spanton, and a scroll for her husband, who put principle ahead of personal gain.

Mostly, Dr. Spanton's life has revolved around his work. He also has Boy Scout affiliations and enjoys working with his yard and azaleas. He has a beautiful lawn and he enjoys propagating the azaleas. Friends often joke with "Mr. Advisor" about his dislike for crabgrass. He has a standing cash offer among certain associates, it is said, if they find crabgrass in the lawn.

Dr. Spanton will retire on November 1. But while retirement perhaps brings to an end his official career, Dr. Spanton's advice and counsel will undoubtedly be sought for many years to come . . . and from him will come the familiar . . . "I hope that my advice will always be based on true knowledge and ripened with wisdom."

Positions and Honors of Dr. W. T. Spanton.

Member of the National Council at Large of the Boy Scouts of America for many years. Awarded the Silver Buffalo award in June of 1961.

President of the Future Farmers of America Foundation, Inc.

Member of the Farm Committee of the National Safety Council.

Member of the Board of Directors of the Farm Film Foundation.

Member of the Editorial Board of Agricultural Education Magazine.

Member of the Editorial Board of The Farmers' Digest.

Member of Alpha Zeta (Honorary at Large), Phi Delta Kappa, Alpha Tau Alpha, Masons (Knights Templar), and National Grange (Seventh Degree).

Awarded life membership in the American Vocational Association; Honorary American Farmer Degree in 1931; Honorary Governor of the American Royal Live Stock and Horse Show in 1953; Distinguished Service Award from the American Agricultural Editors Association in 1959, and citation from the American Country Life Association in 1961.

Donors to the FFA Foundation being recognized at the National Convention.

A FUTURE FARMER believes in doing things for himself, but he realizes he can do more with help. Thus the reason he looks each year to the thoughtful supporters of the Future Farmers of America Foundation, Inc. He is thankful that here is a large group of business firms and individuals who make possible the many hundreds of local, state, and national awards given by the FFA.

He is thankful, too, that the dedication with which the FFA program is supported indicates that people who have been successful in many different careers still consider successful farming as a worthwhile goal for young men.

The National Foundation was established in 1944. Dr. W. T. Spanton and members of his staff took the initiative in developing the program. Previously, contributions or awards were made more on an individual basis.

Today, more than 40,000 awards are given each year to outstanding Future Farmers from funds provided by those who have teamed up with educators and agricultural leaders to support the 380,000 members of the FFA. John C. Denton, president of the Spencer Chemical Company, Kansas City, is chairman of the sponsoring committee this year. Others who have been at the helm through the years represent a wide cross section of American industry.

For your information, as Dr. Spanton retires from his position as National Advisor to the FFA, we are carrying a list of those who now contribute to the Foundation. Perhaps a salute is in order here, too, as well as to the man who has guided the FFA since 1941.

FFA Foundation Donors

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CENTRAL RESOURCES CORPORATION
CENTRAL SOYA COMPANY (and its Feed Division, McMillen Feed Mills)
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Eighteen

and on his way

Bill Harbach, just out of school and operator of two farms, aims to be the one in eight who "stays put."

Hogs now are Bill's main livestock, but he aims to be a cattle feeder.

YOUTHFULNESS needn't be a handicap if you really want to farm. Bill Harbach, an Illinois teenager, has operated two farms totaling 280 acres for the past two years. And he has done it while attending Lena-Winslow High School.

Bill's example is illustrative of what an 18-year-old can do with an abundance of ambition and the right opportunities. As Carl Miller, his FFA advisor puts it, "Bill is a young fellow who has made up his mind where he's headed."

This young farmer tenants two separate farms in the Lena, Illinois, area completely by himself. One is 160 acres—the home farm as he calls it—and the other is 120 acres. He has 211 acres in corn this year and 60 in hay and pasture.

He shares the proceeds on a 50-50 basis with the landlords—his father who rents the 160-acre place from Bill's grandmother, and his uncle, Virgil Harbach of Clinton, Illinois, owner of the 120 acres. Last year Bill cash rented the 120 acres for $3,000.

The lanky, well-built youth has thrown himself enthusiastically into the profession—even to borrowing substantial sums of money. He is nearly $5,000 in debt to a Lena bank to help finance equipment.

"I've learned that it's not shameful to borrow money. This is my third loan from a bank. Actually, it's beneficial for a young farmer to build up his credit rating by making and repaying loans. You have to spend money to make money."

Among the farm machinery items he has purchased are three conventional tractors and a diesel tractor, four-bottom and three-bottom plows, 12 foot and 8 foot discs, 32½ foot wheel drag, four-row corn planter, four-row cultivator, combine, haying equipment, cornpicker, wagons, individual hog houses, manure spreader, hoes, and several different drags.

The young Stephenson County farmer's operation is mainly hogs. Last year he raised 240 head and his herd is about the same size this year. He also plans to feed dairy heifers.

Bill sold some prize-winning Hampshire sheep and a herd of Angus cattle last year to help finance the machinery. The sales netted him about $5,000. He had planned to sell the animals when he bought them.

All of Bill's land is tillable, and he says, "It would not be wise to use it for pasture when I can grow crops."

The brown-eyed, crew-cut youth knows what it is like to work hard. On one occasion last spring, he worked straight through the day and night and had put in 36 hours before halting for rest. The ex-football player looked at the matter philosophically: "The weather was right and the job had to be done."

One reason Bill has been eager to get an early start in farming is the subject of a speech which made him a winner in a district FFA contest. Entitled "One In Eight," the speech stressed that only one of eight youths raised on a farm will be able to remain in the occupation. Bill hopes to be that one farmer.

"I think the first thing a person must do is decide in his own mind whether he wants to really get into farming or if he wants merely to chase around with the boys and take things easy," he said.

In addition to Bill's farming activities, he was president of three student organizations in his senior year—the FFA chapter, the student council, and the subdistrict student council. He was also a first string tackle on the varsity football team and is Sectional and Chapter Star Farmer.

His "B" average also placed him on the school honor roll. He still found time for one or more dates each week.

Bill admits he has much to learn about farming. "I'm particularly looking for new ideas in management and in building modern hog buildings. Some of my building are not what I'd like, and I hope to replace them with modern structures.

"The way I see it, the progressive farmer trying to keep ahead of the field finds it requires a continuous process of learning and utilizing new things."

Bill was graduated last may. Although he does not plan to enter college, he does hope to attend a farm short course this winter.

His role in life has now become that of a full-time farmer. "It's a big challenge. I'm anxious to prove that I can do it on my own. I think farming is a real fine way of life, and I'm happy to be getting into it," he stated confidently.

A new Illinois FFA vice-president, Bill keeps close records on his projects.

Money, Management

Four Young Farmers Tell How They Got Established in Farming

"I credit the help of my family and vo-ag teacher," dairyman Ernest says.

FROM THE TIME man first started hewing fields out of the wilderness, getting established in farming has been no easy lot. Weather, diseases, and, in more recent years, land and capital, are only a few of the obstacles that have had to be overcome.

But through the years, new farmers have made the grade. And they are still doing it! All around you are young farmers who are forging ahead—some on their own—despite the fact it seems harder than ever to break the successful entry barrier.

To tell this story, we asked four topnotch Future Farmers and former Future Farmers from widely scattered areas to summarize their own starts. Perhaps their experiences will be of some help to you in your program. You will note that all four young farmers give special emphasis to the use of credit.

Ernest Lively, Jr., Shelburne Falls, Massachusetts

"I credit my family and my vo-ag teacher with my success so far in farming. It takes moral and financial backing to get started today, along with the deep desire to farm."

Ernest adds that he borrowed money from a credit union where his father works, and also from commercial banks. Because he was under 21, his father had to sign all notes.

"A lack of funds did not lessen my desire to farm. It just made it harder and slower to get started. We bought secondhand equipment and rebuilt it in the school shop. In building the barn additions we cut the logs and had them sawed. We exchanged logs for the sawing."

At present, Ernest has seven milk cows and eight head replacements (a total of nine are purebred). He has 20 acres pasture, three and one-half acres silage corn, 18 acres hay, and 165 acres woods.

"We selective cut 10 acres of timber and in the past four years have planted 4,000 Christmas trees."

Would he go through vo-ag and take the same route if he were to start over?

"Yes, and I would try to get a better farm. I would try to borrow more money at the start to have a larger, more efficient operation."

Kenneth Dalke, Rygate, Montana

"I feel that the main thing in getting started in farming is a deep desire to farm. This desire should be so great that a lack of funds will not lessen the desire. Where there is a will there is a way."

"On entering the FFA, I had some savings from previous agriculture projects. To these I added some money borrowed from Dad and purchased a farm. This was paid for by the time I left the FFA. I sold this farm to purchase my present farm. I have always had access to sufficient capital."

Today, Kenneth operates 1,800 acres, with 400 in grain and 140 in hay. The remainder is summer-fallowed, or grazed with 300 sheep and 50 head of cattle.

"I credit my parents and my FFA advisor for training and guidance," Kenneth says.

He adds he would go the same route if he were to start farming all over again.

"There is a certain satisfaction that comes from accomplishments obtained by hard work," he claims.

"Desire to farm is the main thing," insists Kenneth, now well on his way.

and a Mission

A Staff Report

"I'd take the same route," Glover, a frequent user of credit, insists.

Glover Lane,
Millen, Georgia

"Any Future Farmer today with a deep desire to farm could get started without a great deal of help from his parents, but he would need help in borrowing money for equipment and land."

Glover, 1960 winner of Georgia's top FFA award — Star Planter — found it necessary to get assistance from the Federal Land Bank and from his local bank. "Money was not hard to borrow," he insists. He uses credit frequently.

Glover has 200 acres of land in cultivation, 11 hogs, and eight cows. He credits his brother, a farm equipment dealer, and his FFA adviser, D. L. Stephens, with much of his success. His brother signed bank loans while Glover was a minor.

Glover's father and mother died before he was graduated from high school, leaving him with 68 acres in the home farm and a mortgage on another 150 acres. He took over at 14 years of age and managed to do much of the actual farm work and still continue in high school.

Even with the hardships, he says he wouldn't trade farming for any other job. He and his wife are expanding their program every year and net income is going up, too. This year he has 41 acres in cotton, 45 acres corn, 15 acres peanuts, and 1 acre tobacco. The remainder of the farm is in pine trees.

Larry Brown,
Las Cruces, New Mexico

"When I graduated from high school, I had big plans for a farm of my own. But after pricing land around here—and finding none less than $1,000 an acre—I knew I would have to build gradually by first renting."

Graduated from New Mexico State University in June with an animal husbandry degree, this 22-year-old tenant farmer notes that he isn't fully established in farming yet, but he is on his way.

"To help get into farming, I am planning to teach science or biology at a nearby school next year and farm at the same time.

"Later, my wife and I plan to buy a farm and devote full time to it. Some people have the idea a young man right out of high school or college can go right into farming, but I don't believe that—unless your parents have the land and a partnership can be formed.

"Getting into farming the way I am doing takes a lot of time, but we will make it some day. I borrow money to finance my operation from the local Production Credit Association and a local bank. Without these credit sources, I wouldn't be able to do anything.

"At present, our farm is only 18 acres. We have nine acres in cotton and eight in alfalfa. Hogs are our big enterprise—we have a 50-unit sow herd. The cotton is a good cash crop—it produces around two bales per acre.

"Machinery has presented quite a problem. We solved that by renting machinery from my father-in-law who farms near here."

"I'm growing into business slowly, learning the ropes as I go," Larry relates.

CALF SCRAMBLE

". . . no biting in the clinches!"

To add punch to your fat cattle show and sale, try a calf scramble

By J. O. Paine

HERE IS AN activity that has grown quite popular in some areas and you may like to try it too. It will mean more work for your chapter advisor, but he will probably welcome the receipts. Most of the time the extra money pays expenses of the show.

The requirements are few, though perhaps rigid: You must run faster than the 10-second man on the track team, be tougher than the star tackle on the football squad, and be no older than a junior in high school.

Contestants are furnished a five-foot section of rope with which to fashion a halter for a 300-pound calf. Twice as many boys as calves are turned loose on the football field, baseball diamond, or other similar area that has seating arrangements for spectators.

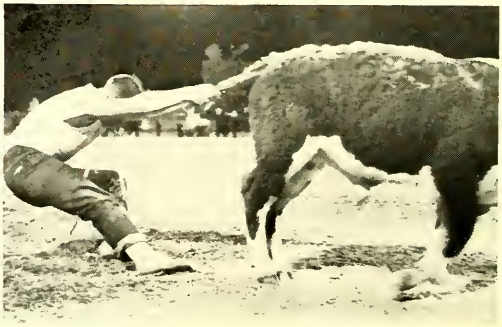
Once a contestant gets hold of a calf, no competitor may interfere. The calf makes his own rules. One thing for sure—he will be unalterably opposed to being led across the finish line.

Contestants who make the calves change their minds get to keep the animals and sell them at the next year's show. The owners pocket the sale price, less an agreed amount which goes toward buying calves for the next scramble. There may be a problem at first with financing the original animals.

Where shows are held in cooperation with other groups, separate scrambles can be conducted for younger competitors. An added attraction could be a greased pig roundup for girls. This all adds up to a lively hour of entertainment. Usually the crowds will be better than for the fat cattle show which the scramble supports.

"Takes two to Tango!"

". . . coming to the finish line, neck and . . . uh!"



New Developments in Ag-Research

SLATTED FLOORS FOR SWINE

HOGS AND ICELAND! No two subjects seem further apart. Yet there is a connection. Swinemen are talking about the use of an idea that originated in Iceland for sheep housing some 200 years ago.

You've heard of slatted floors? Well, that is the idea. It spread from Iceland to Europe and some work has been done there in designing and testing floors for farm animals. Mostly, though, it is still in the development stages.

In this country, the poultry industry has been using raised floors for many years. Some farmers now are using them for swine and researchers are busy finding out more about the requirements, benefits, and limitations of such a system.

Interest is growing because slatted floors reduce the labor needed for cleaning. Droppings work through the slots and can be removed without interference with or from animals and equipment.

At the University of Illinois, agricultural engineers tried three different test floors. They used concrete slats, wood slats, and quarry screen. Pigs were observed during the finishing period to see which flooring seemed best.

The flooring covered the full area of the pens. Concrete slats had a top width of 5 inches and tapered to a 3-inch width at the bottom. Wood slats were made by cutting 4 by 8 fir timber into two equal parts. The cutting was done at a 15-degree angle, so that each slat had one tapered side and a top width of slightly over 4½ inches. Both concrete and wood slats were spaced 1 inch apart. Openings in the quarry screen were about 1 inch square.

The pens were about 6 by 12, with 10 pigs to a pen. This gave approximately 7 square feet per animal. The area was not changed from the time the pigs were moved in at about 50 pounds.

How did this new wrinkle in confinement housing pool out? In the initial work, pigs raised on the concrete and wood slats showed no visible ill effects, according to C. K. Spillman, Agricultural Engineering Assistant, and E. L. Hansen, Professor of Agricultural Engineering. Animals on the quarry screen were rather reluctant to move around and their hoofs showed some wear.

For obvious reasons, the engineers noted, the quarry screen was superior in self-cleaning action. There was little difference between concrete and wood.

Other factors that need to be considered in choosing a flooring material include durability, anchorage, stability with changes in conditions, and cost. Concrete appeared the best choice in this case, the engineers concluded.

Concrete slats five inches wide proved better than other slatted floor materials in University of Illinois research.

HOW DO COWS PRODUCE MILK

HOW DO COWS produce milk? "Simple," you say. "By eating plenty of forage and grain and letting Mother Nature take care of the rest."

But is it so simple? Not to scientists who want a more refined answer. They are concerned with exactly what goes on within millions of tiny cells too small for the naked eye to see.

At the University of Illinois workers even are growing mammary tissues (the material that makes up a cow's udder) outside the cow. For a short time after the cells are placed in glass flasks, they continue to make milk. However, they lose this ability after a few days even though they continue to grow.

One of the amazing things is that some of these cells have been living and reproducing in the flasks for nearly three years.

"Most of our efforts so far have been aimed at stretching the period in which the tissue cells produce milk-like constituents in the test tubes," Bruce Larson, University of Illinois researcher says.

If the substance needed to make the test tube cells produce milk can be found, a giant step in finding internal factors in the cow that cause milk production will have been made.

Why is this so important? ". . . We can more intelligently manipulate dairy cattle for man and his needs," Larson observes.

The mammary gland study also is providing information on what happens to body cells when they grow under abnormal conditions—information that is needed in cancer research to find why some cells become cancerous and others remain normal.

Larson compares milk production with an automobile factory. Raw materials come into various parts of the factory and are manufactured on separate production lines into the frame, motor, body, and other parts. These all converge into one line where the car is assembled.

If production on any of the lines slows up, the total output will decrease.

So it is with milk production, he continues. Billions of cells in the mammary gland turn amino acids into milk proteins, blood sugar into milk sugar, fatty acids into milk fat, and so forth. Finally, these emerge together as milk.

As you can see then, milk production isn't so simple. Next time you hook on a milker, think of those thousands and thousands of tiny cells. You will gain a better appreciation of 'Ole Bossy and how milk is made.

Scientists must handle mammary cell cultures under sterile conditions in order to avoid contamination.

A CHAMPION TELLS HOW TO GROW

A Whopping Crop of Tomatoes

Harvest time is a busy time for the Strings and their Puerto Rican help.

By John Russell

LAST SPRING, Alvin W. String, Jr., of Harrisonville, New Jersey, was named the top young canning crops grower in the nation. A whole chain of honors came his way, including recognition from the National Junior Vegetable Growers Association and the Nation Canners Association.

How did Alvin, the 1959 Star Farmer of New Jersey, come by his awards? Here is the story of an outstanding tomato crop that turned the trick. He enjoys telling about the tomatoes, although he is quite modest about the honors they have brought.

A total of 39,400 plants were set out on a nine-acre field. At the end of the season Alvin harvested 431,844 pounds of fruit which was sold on contract at a profit of $2,333.10.

Fertilizer gets a lion's share of the credit, he claims. "I am a believer in putting plenty on," he adds. "If the plants don't need it, the ground will be better the next year."

Soil test recommendations for the crop are shown below. Alvin chose to put on the amounts of fertilizer shown at the bottom, based on experience and the use of irrigation.

Recommended

250 pounds 0-12-24 per acre (plowed down)
700 pounds 7-7-14 (disked in at planting time)
150 pounds Ammonium Nitrate (side-dressed)

Applied

666 pounds 0-12-24 per acre (plowed down)
1,000 pounds 7-7-14 (plowed down)
222 pounds Ammonium Nitrate (side-dressed)

"During the winter of 1959-60, we applied 16⅔ tons of cow manure to the acre on the field," Alvin said. "Every other year this field is in pasture for the cows (dairy), including barley and sudan grass.

The tomato field was plowed May 4 and later was disked. Then Alvin used his own planting machine to set out the tomatoes, all of which were of the KC-146 variety.

(Continued on Page 34)

Alvin String, Jr., shows his vo-ag teacher a basket of the 1961 crop. "Looks good to me," Frank Miller says.

Partners now, Alvin and his father have 55 acres of tomatoes, along with an asparagus bed and 40 dairy cows.

Alvin and his father use a wagon to haul tomatoes out of the field, then transfer the fruit to a truck for the trip to the cannery. Sometimes they sell on fresh fruit market.

He kept records to find out...

MoorMan's builds pork for less cost

"I've kept cost records on other feeds. I've even made comparative tests. I'm satisfied that MoorMan's can put on pork for less cost than any other feed," says Meade Noble, Fayette County, Ohio.

"The real worth of a hog feed is measured by the cost of pork it will put on hogs. The way to find out is to keep accurate feeding cost records.

Feed costs of $7.82 to get 100 lbs. pork

"We usually market between 500 and 600 hogs a year. My feed cost on 109 spring pigs, averaging 211 pounds at market, was $7.82 for each 100 pounds of pork produced from birth to market.

"This included the cost of corn and MoorMan's Mintrates*. It took only 2.78 pounds of total feed to build a pound of pork."

These doto do not inelude cost of sows' feed or value of sows' milk. On a MoorMan progrom, cost of sows' feed figures about $3 per pig, breeding to weoning, bosed on a 9-pig litter averoge.

Feed cost records determine performance

Important words in Mr. Noble's statement are *feeding cost records.* They're *tools* he uses to determine how well a feed helps him raise hogs for profit.

Like many hog feeders, he found cost-of-production records are the best way to determine that profit.

It takes a sharp pencil and well-kept records on costs of feeding to figure out what kind of a program provides the most pork, and lowest-cost pork, for the feed investment.

That's why you'll find, that when a livestock feeder keeps accurate feed cost records, he'll keep his livestock on a MoorMan Program.

MoorMan's*

Since 1885

Good Results Through Research and Service

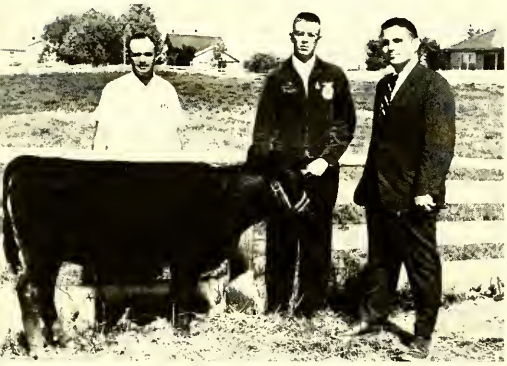
MOORMAN MFG. CO., QUINCY, ILL.

*Trademark Reg. U.S. Pat. Off.

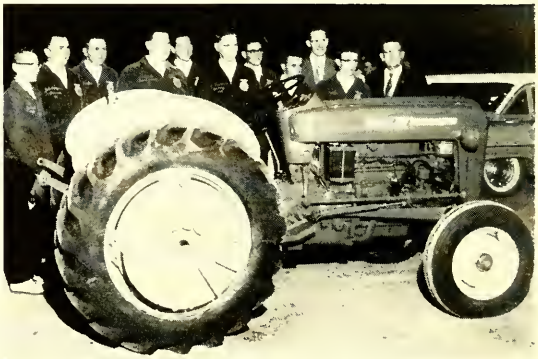
Community service is traditional for the Frankfort, Ohio, FFA Chapter. The latest project: An electric car for Lucille McDonald, polio victim.

photo roundup

Heifer winner Tom Griffin, Twin Falls, Idaho, visits with d-Con's Hamilton Hicks, and breeder D. A. Jackson (left).

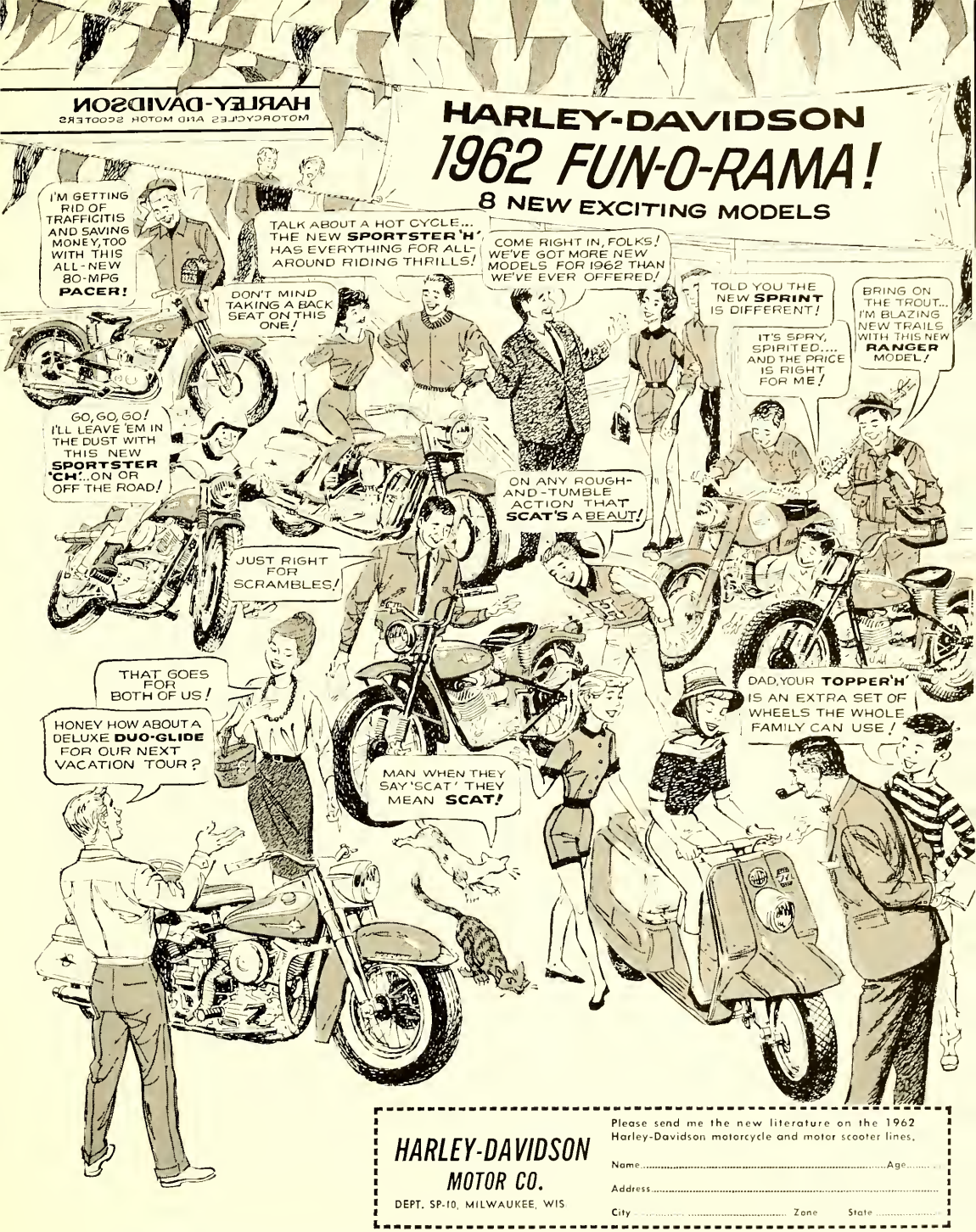


New tractor for the Path Valley FFA, Willow Hill, Pennsylvania, was earned through Vo-Ag tractor cushion sales.



Paul Gray, FFA executive secretary, tells visiting Future Farmers of Philippines about FFA's National Magazine.

Eddy Hawkins (left rear) leads FFP members on tour of FFA Supply Service. Bill Carbin is the engraver at work.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MOTORCYCLES AND MOTOR SCOOTERS
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A WHOPPING CROP OF TOMATOES

(Continued from Page 30)

"We irrigated and it paid off in a big way," the young farmer continued. "At the time we set out the tomato plants it was hot and dry." A sprinkler irrigation system was used.

Insects and diseases were controlled with a well-planned spraying program. The insects that give the most trouble are potato beetles, hornworms, thrip, and two-spotted mites. Spotted wilt, gray leaf spot, late blight, fusarian wilt, and anthracnose are the more common diseases.

"I dusted two times with Dieldrin to kill the potato beetles," Alvin said. Then a commercial spraying firm with large equipment sprayed for the remainder of the season. "The first time we sprayed was on July 25, with three pounds of maneb, three pounds rothane and one pound spreader striker per acre," he continued. "On August 13 we used three pounds maneb, four pounds calcium, four pounds malathion, and one pound of spreader striker. August 26 we used three pounds maneb, three pounds rothane, and one pound spreader striker."

Cultivation included one hoeing in addition to machine work. The side-dressing was put on at the last cultivation—July 7. The big harvest came in September.

Altogether, expenses amounted to $4,468.42. "That is why we need to produce about 12 tons per acre just to break even," Alvin remarked.

The young farmer's tomatoes went to the California Packing Corporation in nearby Swedesboro, New Jersey. They graded 50 percent U. S. No. 1, 48 percent U. S. No. 2 and 2 percent culls. One of Calpak's field men, James Foote, and Alvin's vo-ag teacher, Frank Miller, Woodstown, New Jersey, provided a great deal of information that led to the good crop.

Alvin also looked to his father, Alvin W. String, Sr., a long-time tomato grower, for much of his advice. Mr. String currently is president of the New Jersey Department of Agriculture.

This year Alvin and his father are teamed up in a full partnership on 142 acres they own and 100 acres they rent. Together they have 55 acres tomatoes, a 40-cow dairy herd, 27 acres asparagus, and corn and other feed crops.

Alvin believes in doing the best job he knows how to do. That is why some changes are being made in the tomato program. For one thing, he and his father are trying rows five feet apart instead of the standard 6 feet. They also are spacing the plants two feet apart instead of three. Varieties now include the 146s, 21M, 1409, and 1370. One reason for adding the 21Ms is that the farmers heard these might yield 30 tons per acre.

Mostly the Strings produce for what is called the Canhouse trade (for canning). But they also produce some "block tomatoes," or tomatoes that go on the fresh market. Early in the season these will go up to $7.50 for a five-eighths-bushel basket. Later, prices go down to as low as 75 cents.

When did Alvin first start growing tomatoes? "When I enrolled in vocational ag," he replied. That was six years ago. He has come a long way since then, and his goals are set even higher. He hopes to apply for the American Farmer Degree next year.

A costly fire set the Strings back this year. It destroyed a large building that housed equipment and Puerto Rican migrant workers. Among the machines lost was Alvin's tomato planter. He will have to buy another one before next year. Fortunately, insurance took care of much of the loss.

"I'll have it in plenty of time," Alvin said. "And he will, too," Mr. Miller, his vo-ag teacher, assured.

When Alvin received his $200 Star Farmer award, he had a new farm truck nearly bought before arriving home. "When Alvin sets out to do something he gets it done," Mr. Miller concluded.

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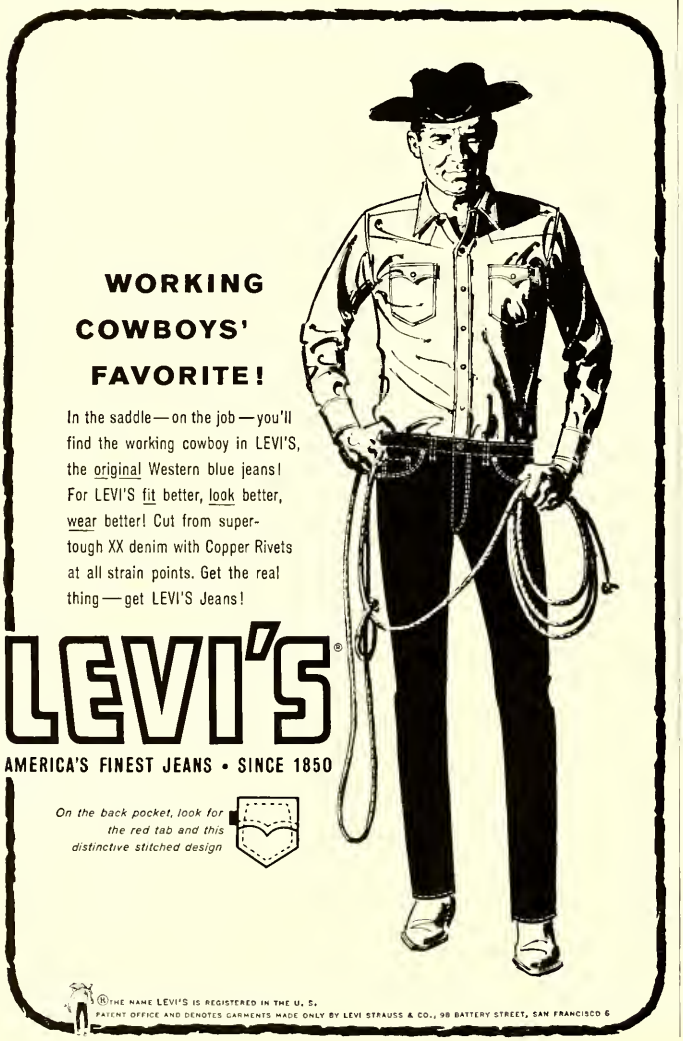
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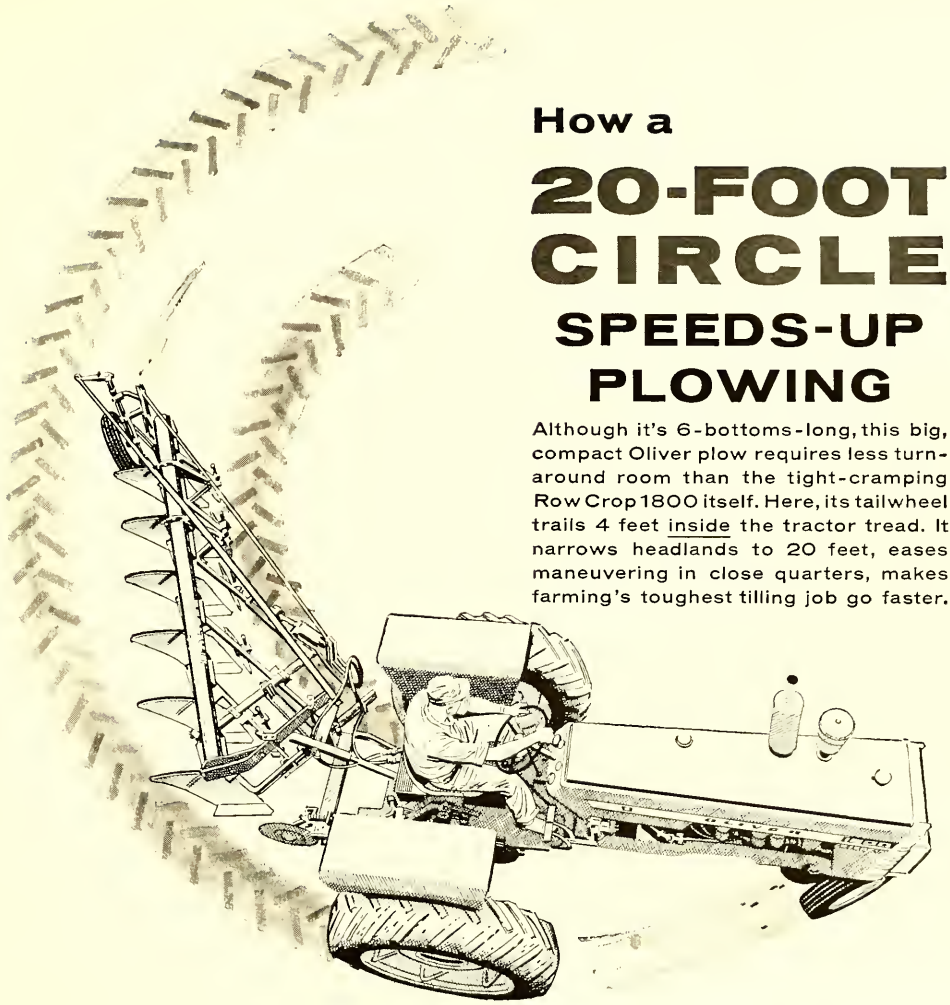

How a

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SPEEDS-UP PLOWING

Although it's 6-bottoms-long, this big, compact Oliver plow requires less turn-around room than the tight-cramping Row Crop 1800 itself. Here, its tailwheel trails 4 feet inside the tractor tread. It narrows headlands to 20 feet, eases maneuvering in close quarters, makes farming's toughest tilling job go faster.

"Plowmakers for the World" at South Bend, Indiana, found a simple way to steer this new semi-mounted No. 5540 around corners. A pivoting hitch—pulling the plow from a single post at front center to relieve side draft—also controls the tailwheel, swings it into any turn the tractor makes.

Innovations by Oliver reach farther than 100 years into plow history—back to the first chilled moldboard and to the sensational Raydex® plowshare that ended resharpening by village blacksmiths.

The Oliver organization and its franchised representatives throughout the world are dedicated to making every step in agriculture more efficient and rewarding—from plowing to harvest. For information on up-to-date applications of power and machines in farming, see the Oliver dealer in your community. Also, seek his aid when equipment and shop facilities are needed for educational projects. Oliver Corporation, Chicago 6, Illinois.

OLIVER

A BUYER + A SELLER = A MARKET

An FFA Tri-County Feeder Pig Sale Brings Buyers and Sellers Together Four Times a Year

FEEDER PIG SALES have found an important niche in a changing system of farm marketing. And often FFA chapters can be found lending a hand. Such is the case around Trenton, Crockett Mills, and Dyersburg, Tennessee.

In the two and one-half years since it was started, more than $100,000 worth of pigs have been sold through the Tennessee Tri-County Feeder Pig Sale. There is a sale every three months, with an average of 500 animals being sold each time.

Good planning and quality pigs make this sale a success. The planners are three local FFA advisors—Sam Reed, of Dyersburg, Walter Hunt, Jr., of Trenton, and Fred Colvett, of Crockett Mills. Much of the work, in turn, is done by members of the three FFA chapters. They help set up the fairgrounds for the sale and meet consignors on the day of the sale to assign pigs to the proper pens.

A week or more before the sale date, the ag teachers and some of their students visit each farmer who plans to sell pigs. All animals must be purebred and purebred crosses, vaccinated by a licensed veterinarian for cholera, and weigh 30 to 100 pounds. A buyer wanting to move pigs to other states also may get health papers.

Each consignor's animals are kept separate at the sale. They are sold according to size and the number of head. This way, buyers can identify their purchases with a producer. Some buyers prefer to buy from the same producer each time.

The cost of selling a pig is 30 cents a head. Volume helps to keep the cost down.

Often pigs are sold right at home—sometimes to FFA members. Most of the buyers come from Tennessee, Arkansas, and Mississippi.

Three of the yearly sales are held at Trenton, in Gibson County, an area of small farms. The original purpose of the sale actually was to give FFA members and adult farmers with a limited amount of corn an opportunity for added income.

The winter sale is held at Dyersburg, in Dyer County, where more corn is produced. It is because of the added corn that Dyersburg farmers often are among buyers at Trenton.

At the winter sale a number of registered gilts and boars are sold. This gives farmers a chance to buy outstanding breeding stock. It also provides an outlet for surplus breeding animals that a Future Farmer may have. Two years ago, Larry Elgin, of the Dyersburg Chapter, sold two registered bred gilts for $155 each.

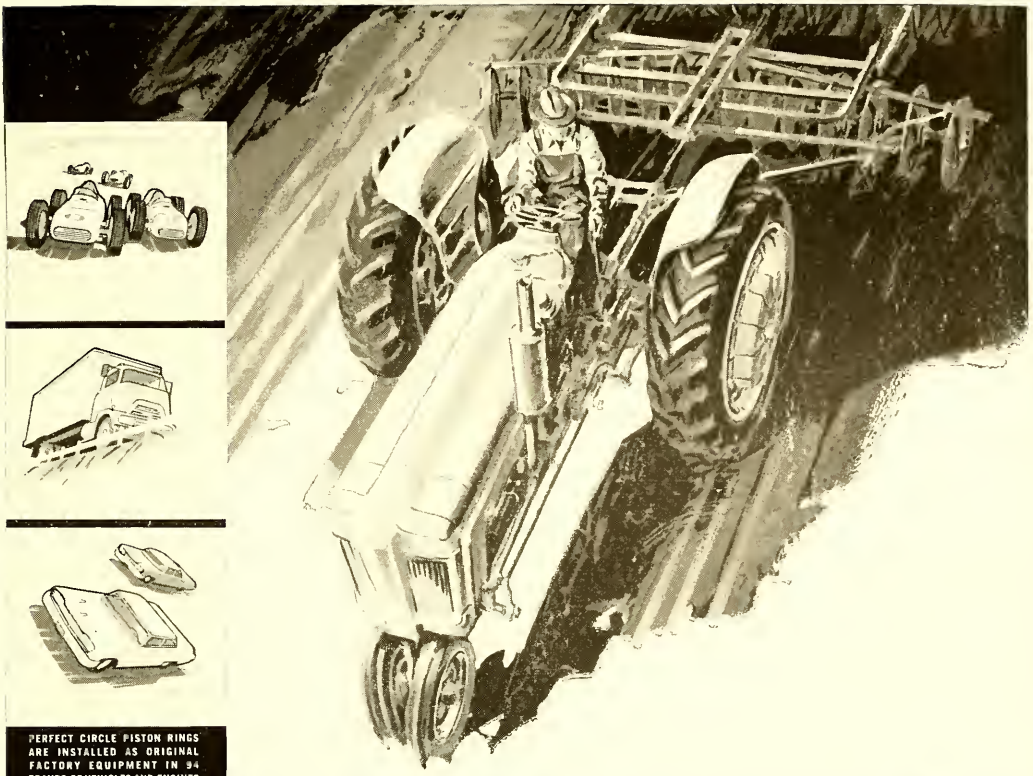
The sale represents a community-wide effort. One big boost comes from TV publicity. A local feed company sponsors time on a Memphis station—WMCT—for two live telecasts. These programs show feeder pigs to be sold while they are still out on the farm. Many FFA members get an opportunity to present their livestock before the public, both on TV and also through radio programs.

Just about every one who buys or sells pigs benefits from the sale. But probably the greatest returns are to the FFA members on small farms. With the help of the sale, they can carry out a supervised farming program of raising feeder pigs and be assured of a market. With four sales a year, they can market a large number of animals in only 12 months—even from a small acreage.

Only three of about a dozen persons who first considered having a sale thought it would work. But it has, and everyone is happy.

◆◆◆

Douglas Shepherd's contribution to a recent Tri-County Sale was this big litter of 11 husky pigs. The animals are sold at weights of from 30 to 100 pounds.



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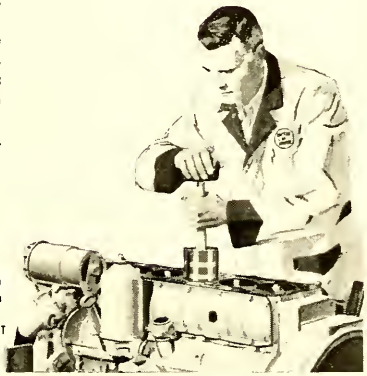
*Based on measurement of top rings from replacement sets for the two most popular V-8 engines.



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A RECORD FOR MIKE

"As Mike moved to his right he saw Larry take out the tackle, and he attempted to cut inside. . . ."

Fiction by
James P. Sweeney

THIS BAXTER TEAM shouldn't give us too much trouble," Phil Sheridan, the Charleston coach, remarked. "We'll use only our basic plays and save the trick stuff for Seymour. The regulars will start, but everyone will get into the act before it's over."

He paused to study the eager faces before him. "It'll be Connors at full, Roberts and Gilbert halves, and Hawkins at quarter. The line will be the same as last week. Remember now, straight football."

The referee's whistle blew. The Baxter kicker rushed forward; the ball was in the air; and the game was underway.

Mike Roberts, swift left half, drifted back, took the ball on the ten and tucked it under his arm. He crossed the twenty, hesitated an instant to allow Larry Gilbert to take out a Baxter tackle, and cut to his right. At the thirty-five he whirled away from a defensive left end, stiff-armed a guard and streaked down the side line. He crossed midfield, the forty, and as he cut back to the left he could hear the roar of the crowd.

A diving tackle by the Baxter safety spilled him at last, and it was first and ten on the fifteen.

"Way to go, Mike," Larry said as the players huddled on the twenty-five.

After Dick Connors had plunged for three yards and Larry had added four more off tackle, Mike took a pitch out from Pete, cut to his right, outran the Baxter left and crossed the goal line standing up.

After Larry's extra point made it 7 to 0, the Charleston team prepared to kick off, and Mike smiled with satisfaction. He was headed for his greatest afternoon, he felt. Already he had carried for more than eighty yards.

He glanced toward the sideline and his smile vanished. Howard Smith, substitute left half, was preparing to come in.

"Nice game, Mike," said Coach Sheridan as the left half arrived at the bench. "Go take a shower. You've done enough for the afternoon."

Without a word Mike seized his jacket and departed. Seating himself in the locker room, he stared glumly at the floor. "It's tough to be taken out just when you're hitting your stride," he muttered.

Mike had found that winning a place on the team hadn't been easy. Even in Junior High he'd been faster and more elusive than Larry. Yet Larry had played on the team while Mike had watched. "Plenty of speed, but too small for competition," the coach had explained.

In high school it had been the same. Larry had been a regular as a sophomore while Mike remained a substitute. "If only I had a chance, I'd show them all up," he used to mutter as he squirmed in helpless frustration on the bench.

Now he was a junior and at last he had made the team. But not until midseason, and then only because Art Porter had suffered an injury. Once a regular, he had quickly demonstrated his ability. Still, he yearned for much more than this. Spurned for years because of his size, he wished to retaliate by becoming the greatest player in Charleston history.

On the bus that afternoon, as the players made the return trip from Baxter, the conversation drifted to the Seymour game. "Do you think we can beat them?" Mike asked.

"We didn't last year," Larry said. "But this season we have you."

Mike smiled his satisfaction. "Too bad Coach didn't let me play more today," he said.

"Are you crazy?" Larry demanded. "Didn't you see that Seymour scout watching us? They'll probably put Olsen on you after what you showed this afternoon."

Once again Mike smiled. At last he was getting some deserved recognition. "What's Olsen like?" he asked.

"He's big, fast and rough. He'll hound you every time you break through the line."

In the pre-game huddle the following Friday afternoon, Coach Sheridan was terse. "They outweigh us ten pounds to the man. That means they'll stay on the ground and try to win with power. We'll have to play a wide open game."

"If it doesn't work, we'll be swamped," Pete said. "We'll play to win, not to hold down the score," the coach answered sharply.

(Continued on Page 40)

Let's put our efforts where our future is

You, and we too, look toward the future of Agriculture. In this is a basic economy of the regions we serve.

As long as forty years ago Union Pacific started its scholarship program for farm youth. Over eight thousand have been granted, for higher education in agriculture. Many winners are among today's leaders — some have watched their children, too, receive these and go on to college.

Investing still further, we work with leaders in agricultural education and industry, to build together for the future of the regions we serve. You may have attended a meeting where Union Pacific films and booklets about your crops and livestock were presented.

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We share the same future together.

UNION PACIFIC
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A RECORD FOR MIKE

(Continued from Page 38)

As Mike moved toward his position, Big Joe Olsen fell into step beside him. "Well, little man, you're up against the big fellows now. We'll have none of that fancy running."

"You can't stop me if you can't catch me," Mike retorted.

The game which followed was fast and rough, beyond anything Mike had ever experienced. More than once the little halfback was shaken up by violent contact with Olsen as he battled desperately for yardage.

It was the fourth quarter now, and Charleston led, 20 to 14. Mike was happy in the knowledge that he'd never played better. Again and again he'd outmaneuvered and outfought the big defensive man to run up a sizable amount of yardage.

But now, as he took the ball from Pete and wheeled and cut through the line, he was brought down to a tremendous tackle by Joe Olsen.

For an instant the lights went out for Mike. He remembered clutching frantically for the pigskin as he plummeted to the turf.

The referee's whistle blew and Joe leaned over to extend a helping hand to Mike. "Didn't mean to hit you so hard," he said. "How you hung on to that ball, I'll never know. You okay?"

Mike managed a shaky smile. "I'm okay," he said, balancing himself on wobbly legs. However, as he walked back to rejoin his teammates he was conscious of a dull throbbing in his right ankle. Then, turning to the sideline, he saw Howard Smith trotting on the field. He pulled off his helmet, gave his replacement a friendly slap on the back and turned to go.

In the locker room that afternoon the boys talked happily as they changed to street clothes. "Seven wins in a row! Wow!" Dick said.

Pete grinned his satisfaction. "Coach sure knew his stuff when he ordered us to play a wide open game."

"How's the leg, Mike?" Larry asked.

"It's fine." Mike laced his shoe gingerly over his injured ankle.

At this point the door opened and the coach came in. "Powersville has just beaten Baxter, 24 to 0," he said.

The boys exchanged dismayed glances. Powersville had won the conference title four years in a row. This season, they, too, had scored seven wins without a defeat. And next week the two teams were to meet on the Powersville field!

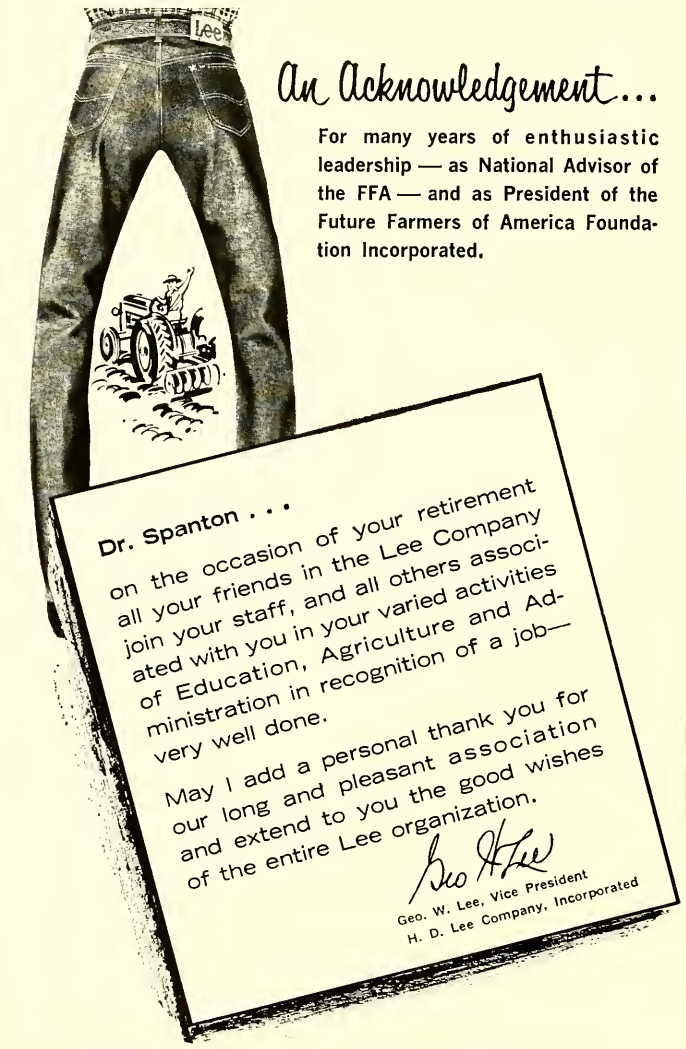
As he slipped into his jacket Mike smiled ruefully and he recalled last year's 20 to 0 defeat at the hands of Powersville. He'd been a sub then. And, watching from the bench, he'd marveled at the machine-like precision of the conference champions.

On the eve of the big game, the Charleston team arrived in Powersville.

"We'll go directly to the hotel," Coach Sheridan said. "Have to be in top shape for tomorrow."

In his room that night Mike still tossed restlessly as the town clock struck one. His ankle, first injured in the Seymour game, had been re-injured in scrimmage, and now it throbbed painfully. From time to time he

(Continued on Page 42)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For many years of enthusiastic leadership — as National Advisor of the FFA — and as President of the Future Farmers of America Foundation Incorporated.
Dr. Spanton . . .
on the occasion of your retirement all your friends in the Lee Company join your staff, and all others associated with you in your varied activities of Education, Agriculture and Administration in recognition of a job— very well done.
May I add a personal thank you for our long and pleasant association and extend to you the good wishes of the entire Lee organization.
Geo. W. Lee, Vice President
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"Stilbosol gives us an extra ½ lb. daily gain"

"That's for both steers and heifers, too. I know that sounds high, but that's what I estimated they did last year," reports Jack Dunlap, Professional Farm Manager, Williamsport, Ohio.

"I quit feeding Stilbosol for a spell last year. Went back to it, though. Why? Because I'm in this business to make money and Stilbosol helps me make it.

"I own nine farms and manage another twenty-two. About 12,000 acres in all. We've got 800 cows and feed out 1,200 to 1,500 head of cattle a year. We also raise 10,000 hogs a year. We sell cattle every month. We've got to. And my steers never did better than this winter (1961)."

Jack Dunlap is a man who speaks with authority. He is a thirty-two-year veteran in the cattle feeding business and is past president of the Ohio Farm Managers' Association. He is also a member of the American Farm Managers' Association and a graduate of Ohio State University.

"You've got to keep abreast of things in this business. And that includes fertilizing for a good corn crop, good breeding practices, practical farm management; and you've got to take advantage of developments like Stilbosol. I'll tell you one thing. I know Stilbosol makes me money," Jack concluded.

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A RECORD FOR MIKE

(Continued from Page 40)

glanced toward the adjacent bed, and he could not restrain a feeling of exasperation as he saw his roommate, Larry, sleeping peacefully.

"He'll be in top form for the game. And I'll have a bad ankle and be dead on my feet," he thought.

Toward morning he fell into a troubled sleep in which he dreamed of being thoroughly outplayed by the big, self-confident Powersville players.

He awoke with a start to see bright sunlight streaming through the window. Larry, already awake, was gazing thoughtfully at him. Leaping from bed, Mike winced as he tried to put weight on his bad ankle.

Larry's face registered concern. "You look tired," he said. "Ankle keep you awake?"

"I guess so." Glumly Mike seated himself on the edge of the bed.

"Tell you what," Larry said. "I'll run to the drug store for some Epsom salts. We'll soak it for awhile. Then we'll strap it up and it'll be good as new."

"Thanks, Larry," Mike said, reproaching himself for any feelings of jealousy he'd harbored against his friend. "And, let's keep quiet about this. No use worrying anyone."

During the pre-game warm up that afternoon Mike's legs felt heavy, and his ankle throbbed. He dared not limp for fear the eagle-eyed coach would bench him in favor of Howard.

As the players huddled just before the kickoff, the coach talked earnestly. "Powersville has a weight advantage, and they'll try to wear us down. They're great on pass defense, so we can't take unnecessary chances. We'll have to be more accurate than usual with the passes we do throw."

"They beat us last year, but we've improved since them." He glanced at Mike. "We're not as smooth as they are, but I think we're faster." Again he glanced at Mike.

The little halfback realized suddenly that the coach was counting heavily on him to turn the tide. Ordinarily this knowledge would have cheered him; today it gave him no pleasure.

The game got underway, and after Larry had returned the kickoff for fifteen yards, the Charleston team huddled at the twenty.

"It'll be twenty-seven," Pete said. "Mike off left tackle. Let's give him some blocking."

Pete took the ball from center, faked to Dick and pitched wide to Mike. As Mike moved to his right he saw Larry take out the tackle, and he attempted to cut inside, but was brought down for no gain.

"Tough luck," Pete said. "We'll try the other side."

Once again it was Mike carrying the ball. And this time he was spilled for a two-yard loss. As he moved slowly back toward the huddle, Mike saw Coach Sheridan standing at the sideline, a puzzled frown on his face.

Mike thought swiftly. This game meant a lot to the coach. He couldn't let him down. He drew a deep breath. Then, turning to Pete, he said slowly, "Let Larry and Dick carry the ball. I'll block."

The boys gazed in astonishment at Mike. Then Pete nodded his agreement, and the game was resumed. Once reconciled to the fact that he was in no condition to gain yardage, Mike concentrated on team play as never before. Playing with desperate intensity, he seemed always to be in the right place at the right time.

The two teams now played on even terms. Midway in the first quarter Charleston received a punt on their own thirty. With Dick plunging for short yardage and Larry slashing off tackle and skirting end for sizable gains, they drove to the Powersville twenty.

Then Pete dropped back, passed to Larry at the ten, and when Mike took out the defensive end with a fine block, Larry romped across the goal line for the game's first score. Larry's kick was good, and now Charleston led, 7 to 0.

But Powersville fought back. Taking the kickoff, they marched eighty yards to score, missed the extra point, and the score stood 7 to 6.

After that neither team was able to launch a sustained drive, and when the gun sounded, ending the half, Charleston still led by a single point.

In the locker room Coach Sheridan spoke briefly. "We're doing fine. Just stay with 'em, and our chances are as good as theirs." He paused, glancing curiously at Mike, opened his mouth as if to speak, then turned and walked away. Coach thinks I'm letting him down, Mike thought miserably.

As the second half began it became apparent that the Powersville coach had instructed his players to disregard Mike as a scoring threat and to double up on Larry and Dick. This strategy proved so successful that Charleston was unable to cross midfield. Meanwhile Powersville pushed across a second touchdown. And as the game entered its final stages they still led 12 to 7.

"No, we don't have any 'Petrolooneum' . . . And stop using that ridiculous voice, Junior!"

With two minutes left Charleston, unable to make yardage, was forced to punt. "Not much chance now," Pete said glumly, as they lined up in defensive formation.

"Maybe they'll fumble," Dick said hopefully. Mike said nothing. He watched closely as Toepfer, the Powersville substitute quarterback, leaned slightly to his right, took the pass from center, feinted to his left, then handed off to the halfback crossing to his right.

On the next play, Toepfer leaned to his left, eventually handing off in that direction. Mike drew a quick breath. Was the substitute tipping off his plays? Perhaps there was still a chance.

Powersville had the ball on their twenty-five. It was third and four. The center bent over the ball. Just to his rear, Toepfer was leaning to his right. Mike crouched, ready to spring.

Then came the snap from center. And at the same instant Mike leaped forward, knifing his way between center and right guard. As he crashed into the Powersville backfield, Toepfer had just completed a fake to his left. Now the confused substitute wheeled and shoved the ball directly into Mike's ribs.

With his injured ankle forgotten and the entire Powersville team in mad pursuit, Mike raced across the goal line for a touchdown.

Larry's kick made it 14 to 12, and that ended the scoring for the day. When the timekeeper's gun sounded, the jubilant Charleston players dashed toward the locker room.

A moment later Coach Sheridan thrust his head inside. "Larry, you're wanted outside," he said. "You've been chosen the outstanding player of the game."

When Larry returned he brushed aside the congratulations of his teammates. "Fellows," he said, "the real hero was Mike. I happen to know that his ankle kept him awake most of the night. Anyone else would have been watching from the sideline instead of scoring the winning touchdown. I want to nominate Mike for next year's captain." With a shout of approval the players made it unanimous.

Later that afternoon, seated beside Mike on the homeward-bound bus, Larry said suddenly, "It's too bad about your ankle. You were headed for new ground-gaining record when that happened."

"Who cares about records," Mike said. "We won the title, didn't we?"

◆◆◆

Dr. W. T. Spanton figured prominently in the group that laid the groundwork for the formation, in 1928, of the Future Farmers of America. With his invaluable help and devotion to the cause of vocational agricultural education, the FFA has grown today to some 380,000 members in 8,759 local chapters. Dr. Spanton has served for 20 years as National Advisor to the FFA and Director of the Agricultural Education Branch of the U. S. Department of Health, Education and Welfare. As president of the Future Farmers of America Foundation, Inc., Dr. Spanton has directed a program of awards to outstanding young farmers in excess of $130,000 a year.

The B.F.Goodrich Company, which shares Dr. Spanton's deep interest in agriculture, salutes the FFA on its good fortune in having so enthusiastic and dedicated a leader. And to Dr. Spanton B.F.Goodrich extends congratulations on a brilliant record of achievements and best wishes for the future. *The B.F.Goodrich Company, Akron 18, Ohio.*

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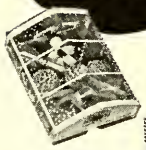

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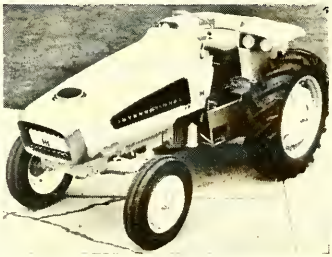
something new

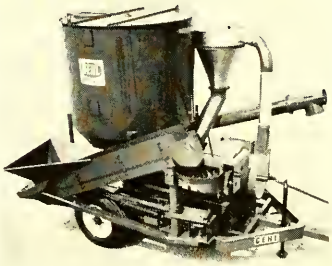
This over-the-axle mounted two-row picker is available in Models 170 and 150 for D-17, D-15, and D-14 tractors. Product of Allis-Chalmers, Milwaukee, Wis.



No shift or throttle! International Harvester's (Chicago) latest test tractor teams a gas turbine engine with new-type hydrostatic transmission.

Low-cost Harvestores in 2,450 and 4,700-bushel sizes are similar to bigger glass-lined storage units. Made by A. O. Smith Company, Kankakee, Ill.

Crusher-feeder heads speed grinding with the "Mix-All Feedmaker" made by Gehl Bros. Mfg. Co., West Bend, Wis.



Pamper Pads to keep pigs warm are powered by electricity. Product of Pamper Pad Company, St. Marys, Ohio.

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You can count on Moline for new ideas, new methods, new machinery. You can count on Moline to help you in your modern farm management. And you can count on Moline to help you farm more profitably — today *and* tomorrow.

Look to *MOLINE* for the news in modern farm machinery

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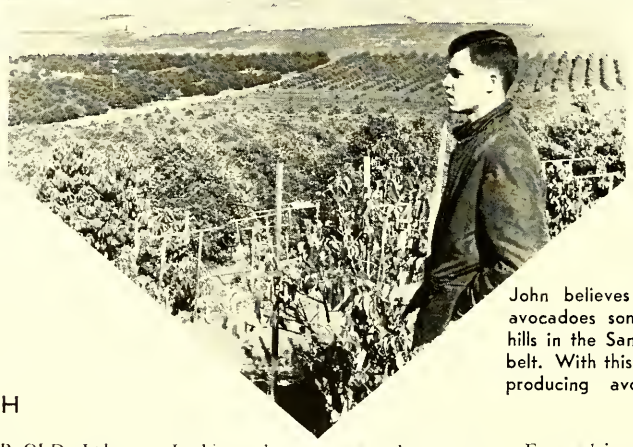
John Burr sets out neat rows of olive cuttings which are worth fifteen cents each when sold at the age of six weeks.

In nine months, the cuttings can be sold as nursery stock for $1.25 each. For this reason, he actually prefers to wait.

Success With Seedlings

By
James E. Williams



John believes that both olives and avocadoes some day will dot grassy hills in the San Joaquin Valley's citrus belt. With this in mind, he has started producing avocado seedlings, too.

FUTURE FARMER CASHES IN ON AN EDUCATED HUNCH

SEVENTEEN-YEAR-OLD John Burr staked $100 of borrowed capital on an educated hunch four years ago and now he has the makings of a profitable business. His occupation: Raising olive tree seedlings. His present net worth: $9,000.

A member of the Lindsay, California, FFA Chapter, John chose olives while searching for a freshman vo-ag project. He ruled out citrus, partly on the advice of his father, Jack Burr, a citrus grower.

Citrus, he admits, is his first love and many fellow students chose such a project. "But Dad felt the area was overplanted to citrus," John recalls, "and since I wanted to sell seedlings instead of grow the fruit as is done in most projects, I might run into a depressed market."

John also reasoned that since olive seedlings are delicate and the task of growing them is time consuming for the average grove owner, demand would be high for quality cuttings.

Within one year, he sold $1,500 worth of trees, and the orders have never stopped.

In his sophomore year, the young farmer acted on another hunch. He branched out into avocado seedlings. Few are planted in this olive and citrus section, but the trees seem to do well in the rocky foothills which border the San Joaquin Valley. Besides, the fruit is ready for market about 10 days before southern California avocados.

John envisions the grassy hills someday dotted with avocado and olive trees. He is making sure he is on the ground floor. But no matter what lies ahead, his early labors have assured him a college education. This will come partly through a $400 Santa Fe Railway scholarship he recently was awarded.

John plans to put his business in the hands of someone else, preferably another Future Farmer, on a percentage basis for the next four years. He wants to study for a degree in horticulture and farm management.

The young farmer spent many hours on research before starting his project. He visited the University of California Agricultural Extension Service office in nearby Visalia for information.

Farm advisors steered him to a grove which was considered one of the cleanest in the area from a disease standpoint. Bud Wyatt, of Porterville, the owner, agreed to supply John with all the olive prunings he could use. Next, John found he could get cans for transplanting from the Porterville State Hospital.

Then the Future Farmer, who only two years later was to be elected San Joaquin Regional FFA President, marked off a 4 by 12 foot space behind his father's garage and turned $12 worth of materials into a hothouse. The biggest cost items were a humidifier at $100 and a heating unit at $28. This took John's capital and most of his savings.

To maintain quality, he removes the soil from the hothouse after each set of cuttings are transplanted into cans. He refills the box with virgin soil and plaster sand, then tops this mixture with vermiculite. Then comes the tedious task of setting out 6,000 four-inch cuttings.

(Continued on Page 51)

No soil was ever this fertile!

There is a story in folklore about land of such fabulous fertility that a seed, pressed into the soil, sprouted so fast it tickled the farmer's foot.

Of course, this is a tall tale, as no land was ever this potent in productive power. In fact, most soils in their virgin state were lacking in certain plant foods. Today, almost every soil needs more nitrogen to produce profitable yields.

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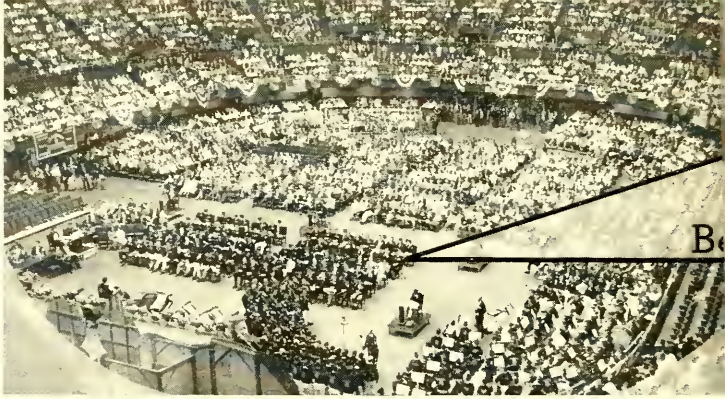

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A CONVENTION-GOER or not, you can feel you are a part of the big annual meeting scheduled for October 10-13 in Kansas City. Someone will be there to represent you —someone from your state, maybe even from your own chapter.

You can look to these representatives to carry the ball for you and to report back on what takes place.

Some states specifically ask their official delegates and others to keep a written record of the National FFA Convention. This can be a big help in making reports back home, as well as a way for the delegate to get more out of his trip. Maybe your chapter will want to schedule a report from someone who is going to Kansas City.

Arizona delegates are given a guide book to direct attention to more important aspects of the trip. This same folder has a place for names of award winners, new National Officers, and new acquaintances. Near the back is space for notes and there are some questions to be answered about the National FFA organization.

Montana Future Farmers get a sheet of travel tips, along with the notation that each is to submit a written report.

YOU Will There

Both this and the Arizona booklet supplement a folder prepared for every convention-goer by the National Officers. The latter, "You and Your National FFA Convention," gives tips on just about everything pertaining to the trip, as well as suggestions on ways to make informative reports.

Arizona delegates also are asked to write at least two letters home—one to parents and one to the chapter. A letter to the school principal or superintendent might also be appreciated, it suggests.

"Try to meet and visit with Future Farmers from as many different states as possible," every Arizona delegate is urged. "Ask them about their farming programs, chapter programs of work, and so forth."

All of these things make for a better informed traveler who should be able to put you on a front-row seat—even if you don't leave the farm.

Here are some other things often asked of FFA'ers headed for Kansas City:

Read carefully the pamphlet, "You and Your National Convention."

Keep in touch with your advisor and indicate to him which tours you are interested in.

Use your time effectively (Remember someone at home is sacrificing, doing your work, so that you can attend).

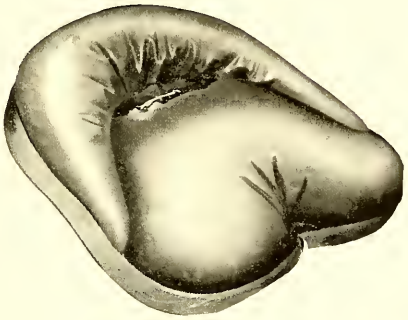
Plan to be at the sessions early and sit with your group.

Remember your conduct in the hotel, in restaurants, on the bus, plane, or train, in theaters, and elsewhere.

Have your FFA jacket, at least two white shirts, FFA tie, slacks, and polished shoes.

Plan to be in your hotel room by the time your advisor designates.

These suggestions, if followed, should help your representatives get more out of the FFA's biggest meeting of the year. And they should help the travelers to bring more back. So, have a good Convention!



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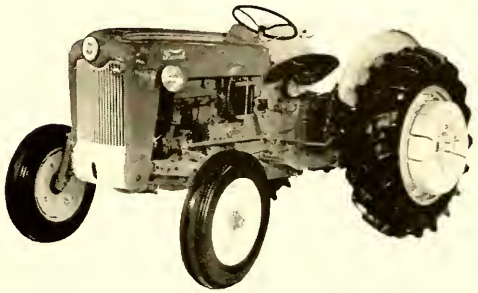


WRITE
HEART OF DIXIE PRODUCTS
MONTGOMERY, ALABAMA

By Henry H. Graham

I AM DEEPLY indebted to my father for a great many things. But among the more valuable were the tips he gave me on hunting safety. I shall never forget them.

I accompanied him on hunting trips long before I was old enough to carry a gun. During those sojourns afield he would take time to teach me how to carry a firearm and what precautionary measures to use so that the danger of accidents would be reduced to a minimum. I observed him closely and listened attentively, learning that he never took a chance of any kind. He had hunted regularly since boyhood, without ever being involved in a mishap with a gun.

"Always remember," Dad used to say over and over, "that in careless or incompetent hands a gun is a very dangerous thing—a death weapon. When you're old enough to hunt, keep the gun uppermost in your mind at all times."

In those days Dad used a hammer shotgun. I noticed that as we sat together in a duck blind, the hammer was invariably at half cock—on safety.

"Why don't you keep the hammer all the way back?" I once asked him. "Then all you'll have to do is pull the trigger when birds come along. It would save time."

"Because it wouldn't be safe," he told me. "The gun might go off accidentally if the trigger caught on something. It's a simple matter to pull the hammer all the way back as you elevate the gun to shoot. It only takes a second."

On one of our first trips we had occasion to go through a fence. Dad removed all the shells from his gun, put it through the fence and laid it down on the other side. Then he crawled through himself.

"Is it really necessary to take out the shells when you come to a fence?" I asked. "Seems like a lot of trouble."

"It's the safest plan," he declared. "Then nothing can go wrong. Careful hunters always do this. I want you to follow the custom. Many people have been killed by guns when going through a fence."

Little by little I picked up information on hunting. I shall never forget the first time I went with Dad as a hunter myself. It was truly a red letter day. I had a shiny new shotgun of which I was very proud. We were after quail.

Many times in the first five minutes after we left the car, Dad asked me whether my safety was on. He believed in endless repetition of a warning so that I would not forget even once. He well knew that one time might be one time too many.

Two quail whirled into flight and I prepared to fire. "Hold it!" he shouted. "You don't know what's on the other side of that weed thicket. Maybe someone is working there, or maybe some cows or horses are grazing. No quail, pheasant, or duck is worth the risk of killing somebody or some animal, or even spraying shot against a building." I never forgot what he said.

As we walked through the field Dad noticed that my gun was pointed in his general direction. "Never point a gun at anything you do not wish to kill," he asserted. "Point it away from a companion, not toward him."

Returning to the car after the hunt, the first thing Dad did was to remove all the shells from his gun. Having seen him do this many times, I followed suit automatically."

"A loaded gun should never be transported in a car or other vehicle," he emphasized. "Make it a rule to keep yours empty when traveling. This is only common sense. There is ample time to load up when you get out of the car and begin to hunt."

When we arrived home, Dad took his shells, as usual, and locked them in a cabinet. Then he took mine and locked them in a different place.

"They must be kept out of the reach of small children who might be in the house," he said. "I put your shells in a separate place because yours are twelve gauge and mine are twenty. If they get mixed, you could be putting one of my twenty gauge shells in your twelve gauge. It would slip part way down the barrel and lodge."

On another occasion, we were sitting in a goose blind one blustery day, waiting for something to happen. Dad remarked, "We've never gone big game hunting but in years to come you probably will. Big game rifles are powerful, and carry long distance. You should be dead certain of your target. Binoculars are a big help. See enough of the animal to make sure what it is."

"Dress in clothing that people can see. In many areas red is best: in others, yellow. If you are in doubt, ask a sporting goods dealer."

"As you continue to hunt," Dad added, "you will no doubt want to go out with other boys around your own age. Some will likely be inexperienced, or careless, or both. Give them a wide berth—at least until you know positively they have learned to observe precautions."

"If at all possible a boy who wants to hunt should accompany a well-seasoned adult many times before going out alone or with others his own age.

Dad had still another suggestion: "Make sure your gun always is in good condition. It may develop what is known as a hair trigger, going off much too easily. This should be corrected. It is a good idea to have your gun thoroughly checked once a year by a competent gunsmith."

"Never shoot from a car or across, or from, a highway," Dad said. It is not only illegal in most if not all states, but dangerous to people and livestock. He told me that people who did these things were not true sportsmen at all. He also warned against accidentally sticking a gun barrel into the mud—because with the barrel clogged it could blow up when fired.

What a wonderful hunting pal Dad was! And what a thorough job he did in teaching the principles of safe hunting! The boy who has the advantage of a tutor is indeed fortunate. I was one of the lucky ones.

◆◆◆

"Keep the gun uppermost in your mind all the time," he used to say.

SUCCESS WITH SEEDLINGS

(Continued from Page 46)

The cuttings are treated with a hormone to induce growth. John keeps constant check on the soil and air temperatures, even though they are controlled by a thermostat.

All of these things, in addition to the detailed records John keeps, may be the reason that judges in the Security-First National Bank's project competition last year decided he had one of the best FFA projects in the state.

John is hampered by lack of time. He often works from 7 a. m. until midnight, watering nursery stock, setting out cuttings, and transplanting. This year, FFA duties took up a lot of time; yet he found time to enter public speaking contests, be a member of the school's citrus judging and parliamentary procedure teams, and attend the state FFA convention.

John is quick to list his mistakes. "I could have stuck to my project a little more in the early stages," he confesses. He figures he puts in a minimum of 400 hours a year.

One serious setback came when he sold all of his cuttings directly out of the hothouse and then lost a complete set of cuttings to brown rot. This left him short of nursery stock and cut profits to $500. He plowed this back into the business, building a greenhouse for avocado seedlings and improving his olive hothouse. John says he would rather sell transplanted olive cuttings for $1.25 each than young cuttings which take only six weeks and bring 15 cents each.

Of his many titles and awards, including the State Farmer Degree, John is especially proud of the second place he won in a sectional public speaking contest last spring. It gave him a chance to wax eloquent on his favorite subject, farm subsidies. He looks forward to the day when farmers will shake off government controls.

Meanwhile, this Future Farmer has a strong faith in the future of farming. A college education should pave the way even more for his educated hunches.

LOOKING FOR FUN

NEED a new way to entertain the gang this fall? Young people in the Missouri Ozarks have great fun with a paper chase—a modified version of the traditional treasure hunt.

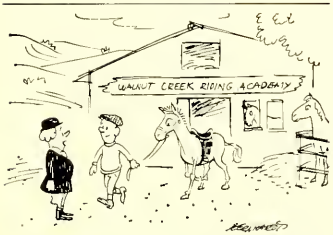
What you do is follow a trail of paper scraps instead of the usual written clues or signs. The last person, or persons, in line picks up the paper. That way, you don't leave an unsightly mark to alarm the neighbors.

Pick a moonlight night, preferably, after you have obtained permission to travel over a mile or two of open country. Your leader can be someone's parents who set out about dusk—at least half an hour before the departure time.

Old newspapers make ideal trail material. An old catalog is better. The leader drops six to eight-inch sections of the paper every fifteen to thirty feet. He may choose to cross a corn stubble field or a small stream with a safe footbridge. An occasional dead-end trail off to the side adds variety.

A Missouri "chase" once led across a patch of late watermelons. This was intentional and there was a pause for samples. At another time the same group passed by the side of a cemetery.

At the end of your paper chase you have a weiner roast or any other type of entertainment. If the hike is a long one, you may want hay wagons for the trip back. Have fun!



"If I want to pass someone, how do I blow the saddle horn?"

SUCCESSFUL CATTLEMEN CHOOSE HEREFORDS

The fact that Herefords go hand in hand with a successful beef cattle operation is easily proven by the numbers of Herefords you see every day in feedlots, in stockyards and on the ranches and farms across the Nation. They are there for one simple reason . . . they make a greater net profit for their owners in all phases of the industry.

Many boys and girls in their beef projects choose Herefords for profit reasons, as well as the fact that Herefords are gentle and easily handled. Herefords are not by nature wild and hard to halter break.

The American Hereford Association has a junior membership program which is open to any FFA member owning at least one registered Hereford. Details on this are available by writing the Association.

The Future Cattleman, a 79-page booklet containing information on fitting, showing, grooming and feeding Hereford show calves is published by the Association and is yours free upon request.

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F.F.A. DAY, OCT. 13
Welcome to Kansas City
and the
AMERICAN ROYAL
LIVE STOCK & HORSE SHOW

"I know of no pursuit in which more real and important services can be rendered to any country than by improving its agriculture..."

GEORGE WASHINGTON, 1794

HUMBLE OIL & REFINING COMPANY HUMBLE

By Stan Allen

Bob Richards
The Vaulting Vicar

ALL SPORTS FIGURES are not rewarded with banner headlines and big paydays. Many great athletes are amateurs who perform for love of the game and the challenge of competition. Such an athlete is the Reverend Robert E. Richards, outstanding pole vaulter and all-around track and field champ.

Bob Richards was gifted with many athletic abilities during his early years in Champaign, Illinois. He was a basketball player in junior high school, a star quarterback on his high school team as a senior—earning a berth on the Illinois All-Star high school football team. He was 12 years old on his first try at pole vaulting when no one else went out for the event. He won with a jump of 6 feet 9 inches.

Richards began a fine collegiate career at Bridgewater College in Virginia during 1944 and '45. He helped to lead Bridgewater's basketball team into the semifinals of the Mason-Dixon conference tournament in '45 and also won six events in the track meet including the pole vault. Winning a scholarship, Bob transferred to the University of Illinois in 1946 where he began to concentrate on just vaulting. He reached 13 feet 8 inches that year to tie for first place in the Chicago relays. The cross bar kept going up on his jumps and he tied for the AAU vaulting championship of '48 with a jump of 14 feet 6 inches. He participated in his first Olympic Games in London that year finishing third. He won the AAU pole vaulting title of the 1949 Millrose games and was awarded the Rodman Wanamaker International Trophy. He barely missed the 15 foot mark in the 1950 Millrose games at 14 feet 11 inches which won him another Wanamaker trophy.

He really began to soar in the 1951 Millrose games and became the second man in sports history to clear the bar at 15 feet. His 15 foot 1 inch jump won those games. In 1951, he won all of the AAU indoor and outdoor national titles, the Pan-American Games in Buenos Aires, the Millrose games again, the Milwaukee, Chicago and Los Angeles relays, Knights of Columbus games and the Rocky Mountain AAU championships. Bob cleared the bar at 15 feet or better eight times that year and was awarded the Helms Foundation Trophy and the 1951 James F. Sullivan Memorial Trophy.

In 1951 Bob was a speaker at the John Muir College in California and was invited to appear in a decathlon event, a series of ten different track and field contests. He accepted the invitation and won with a total of 7,642 points in his first try at this type of competition. Later he won the AAU national decathlon with an amazing total of 7,834 points. Here is how he did it: pole vault—14 feet; high jump—6 feet ½ inch; broad jump—22 feet ½ inch; 100 meters—10.9 seconds; 400 meters—51.8; 1,500 meters—4 minutes 56.1 seconds; 110-meter hurdles—15.3; shot put—42 feet; discus—135 feet 7½ inches; javelin—185 feet. Bob won this event again in 1954 and 1955, setting a world decathlon pole vault record of 15 feet in 1954. He was named to the Helms Sports Hall of Fame in Los Angeles in 1955.

Bob represented the United States at Helsinki, Finland, in the 1952 Olympic Games and won the pole vault with a new record jump of 14 feet 11.14 inches. He won another Olympic gold medal at Melbourne, Australia, in 1956. In all Bob Richards has cleared the bar at 15 feet or better well over 100 times. His top height was reached in winning the 1957 Washington, D. C. star track meet at 15 feet 6 inches.

Richards stands five feet ten inches and weighs 165 pounds, not an ideal build for pole vaulting. This handicap has been offset by his determination, coordination, strength and many hours of practice. His leap in life has been high too, as he has a Bachelor and Master of Arts degree, was an assistant professor of philosophy at the LaVerne College in California, and an assistant in the sociology department at the University of Illinois. A minister-at-large for the Church of the Brethren, he has been called on for as many as 300 speeches a year. It was a job for this amazing fellow to find time to keep in shape for his jumping.

Today Reverend Bob Richards is director of General Mills Wheaties Sports Federation, an organization established to support President Eisenhower's plea for increased American fitness.

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THESE booklets are free! You can get a *single* copy of any or all of them by mailing the coupon below. Just check the booklets you want and send us your *complete address*. Do it now!

98—Feedlot Layouts—You will find actual feedlot plans, along with information on different types of equipment in this timely booklet for beef farmers and dairy farmers. Diagrams show two installations in Iowa and Wisconsin. Also included is an article on how to convert a stanchion barn into loose housing. (Badger Northland, Inc.)

99—Coccidiosis—Probably the most serious and most prevalent infectious disease of poultry is Coccidiosis. Tiny organisms called coccidia cause loss of weight, depression, and death as they destroy cells normally used by the chicken in digestion, absorption, and assimilation. Here is an illustrated review of the problem, along with tips on prevention and a look at the future. (Dr. Salsbury's Laboratories)

100—Automatic Livestock Watering—The lifestream of production on a livestock farm is a well planned water system designed to supply plenty of clean, fresh water at all times. This booklet tells you how much water is needed by cattle, hogs, sheep, and poultry, and it also suggests ways to supply it. (Ritchie Manufacturing Company)

101—Forage Fertilization Pays—A $ sign on the cover of this booklet emphasizes what you find inside—profit-making possibilities from the use of plenty of plant food. Stories from different parts of the country show graphic results. Find out how to get more stock-carrying capacity per acre and more milk and meat per animal. (The American Potash Institute, Inc.)

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SHE'S 37.832 LITER COW

A lot of talk has been going around lately about the United States switching to the metric system of weights and measures. If this goes through, some of our time-honored expressions would change, says the National Geographic Society.

Here is the way some of them would turn out:

A miss is as good as 1,609.3 meters.

I wouldn't touch that with a 3.049-meter pole.

All Texans wear 37.853 liter hats.

God's little .4047 of a hectare.

It's all wool and .9144 of a meter wide.

That's not all! Your wife or girl friend isn't going to like it when you refer to her fascinating measurements as 92-61-92! She probably will hold fast to the old measurements and won't budge 2.54 centimeters.

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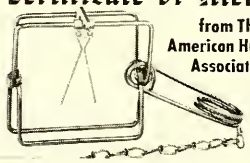

use the Victor Conibear

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"The American Humane Association hereby cites the Animal Trap Company of America for honored recognition in advancing the principles of humanitarianism by producing and marketing the Conibear Trap which alleviates cruelty and suffering in the trapping of muskrats."

The #110 Victor Conibear, originally designed for muskrat, works equally well for mink, opossum, skunk, weasel, squirrel, civet cat, barn and wharf rats and similar size animals. It grips the animal's body and won't damage its valuable pelt. You can set the Victor Conibear almost anywhere—in holes, runways, cubbies, on rafters and poles—on the ground, suspended, under water, ice or snow.

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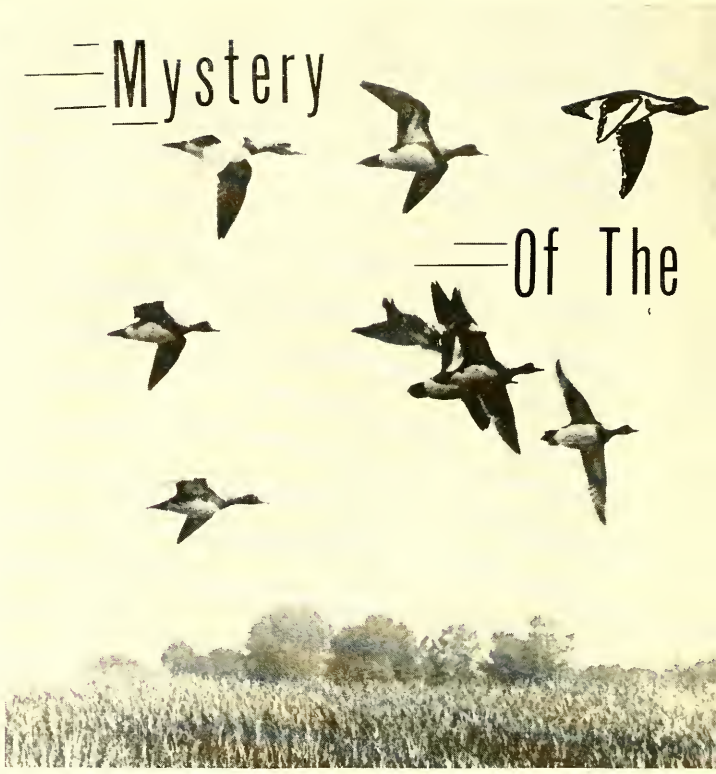
PILOT OYSTER SHELL For Poultry

Oyster Shell Products Company
Mobile, Alabama

Mystery Of The



Why Do They Fly North and South? How Do They Find Their Way?

By Henry N. Ferguson

WHO HAS NOT HEARD, in the stillness of early autumn mornings and evenings the distant sound of wild geese and ducks? Or in the night, the faint peeps and chirps of small land birds flying South in the darkness? And who has not observed marshes and lakes covered with thousands of birds resting and feeding between flights?

Since earliest times the sounds and the sights of the great seasonal migrations have awed man. He also has marveled at the enormous distances birds travel and at the miraculous way they guide themselves to specific pinpointed spots. How can they find their way from one end of the earth to the other?

The compass is thought to have been invented in the 12 Century; some 300 years later Columbus made use of it to cross the Atlantic and find a new world. But birds had been navigating confidently about the planet for a million years before that!

Only in recent years has science begun to clear up this mystery, although man's interest in the strange behavior extends back into ancient times. Homer spoke of this phenomenon in 1000 B.C.; Jeremiah was amazed at the miraculous manner in which migratory birds returned each year; and 300 years before Christ; Aristotle was observing, erroneously, that a chosen leader always heads the migrant flocks.

Some birds cover a remarkable distance. The golden plover, little larger than a robin, builds its nest in the frozen wastes of the Canadian Barrens. It leaves in August and September, flying East to Newfoundland and Labrador, then South non-stop over the ocean for a thousand miles or more to Bermuda. From there it goes on to spend the winter in the Argentine. The Pacific golden plover flies from Alaska and the Aleutian Islands two thousand miles to the Hawaiian Islands.

No one knows exactly why birds migrate. During the ice age, much of

Migrating Birds

North America was covered by a great ice sheet which forced all bird life to fly South. As the ice melted, the birds were able to travel farther and farther North. For many centuries the glaciers alternately advanced and retreated. This has convinced some experts that here was the beginning of bird migration.

Others believe birds fly South to escape cold weather. This has an element of justification, yet how does a young bobolink, hatched in June, know that cold weather is coming in November? By what instinct is it directed to begin its flight to South America in August?

One very intriguing question, never satisfactorily answered until recently, is how birds, after a flight of several hundred or several thousand miles, are always able to return to the same spot year after year.

Some scientists have speculated that this ability may be due to an innate sense of direction, such as is found in aboriginal men living in jungles and heavily forested regions where they would become lost daily were it not for this highly developed faculty of orientation.

Others feel that the answer may be bound up with a bird's "homing instinct," a hereditary gift which has been known and employed by man ever since Noah sent out a dove over the waters.

The manx shearwater bird has developed this sense to a fine point. These birds live in burrows in a cliff on the coast of Wales. One was banded and taken by air to Boston, Mass., then released on June 4, 1952. Just 12½ days later, it slipped into its burrow in Wales, 3050 miles distant across the ocean.

By patient observations and bird banding, naturalists have plotted the migration routes of various species. They have found that in the spring the northward flight is triggered not by changes in weather — as in the fall flight—but by chemical changes in the bird's body.

The mystery of how birds find their destinations with unerring accuracy has been at least partially solved. Dr. Gustav Kramer of Germany has proven through elaborate cage experiments that starlings, which fly by day, use the sun as a compass and actually adjust their course to the sun's changes in position as the day goes on. They also use rivers and mountains as guides, especially as they near their goals.

But these discoveries did not apply to birds that travel at night. So Dr. Franz Sauer, another German scientist, began experimenting with night-migrating, Old World warblers and made the discovery that these birds navigate by the stars. At their first sight of the sky they automatically know the right direction in which to travel. They have a kind of built-in time clock and adjust their course as the night goes on. By use of radar it proved that if fog or clouds or rain obscure the stars, the birds become confused, and their migration comes to a temporary halt.

It is still not known where within the bird's body the orientation systems are located or how they evolved. Nor can scientists say whether all migrating birds use the same navigational guides. But one basic fact has been established. Some apparatus does exist in each migratory bird's tiny brain at birth which makes him at home on the earth as man, with all his inventions, will never be.

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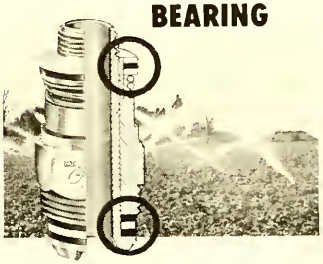

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The Case of the Missing Camera

ON THE WAY to the National FFA Convention in Kansas City last fall, a group of Future Farmers from X state paused in Springfield, Illinois. There, they visited the Lincoln Tomb and took some pictures. You see part of the results here.

Soon, they were off again, headed for Missouri. Next they stopped to photograph an island in the middle of a river, possibly the Mississippi.

Later, they were at the home of Mark Twain in Hannibal, Missouri. As they took more pictures, they probably thought back over the tales of Tom Sawyer and Huckleberry Finn. The

center of attraction here was the old Twain home and its high board fence that young Tom allegedly persuaded his friends to whitewash.

Then it was on to Kansas City! More stops and more picture-taking followed, but some didn't turn out so well—at least on one roll of film. Two of the eight shots were blank.

The story almost ends here—but not quite. The Future Farmer who took these pictures lost his camera somewhere in Kansas City's big Municipal Auditorium. Fortunately, it did turn up and was placed in the hands of convention officials. It is still waiting to be claimed —though it now is in Washington, D. C., in the National FFA Office.

The want ad might read:

WANTED—A Future Farmer who can identify the camera, the other pictures, and who leans slightly to the right when his finger is on the shutter.

◆◆◆

History of the Breed

SHORTHORN

Another in a series on the origin of our livestock breeds.

IT WAS to become an important milestone in the history of American farming when a cargo of English Shorthorn cattle landed in Virginia in 1783. This marked the beginning of the purebred movement in America.

In those days both beef and milk were a necessity from the same animal. Another valuable asset of the Shorthorn was his ability to provide power for wagons and plows. By 1854, however, Midwestern farmers had begun to import Scotch Shorthorns and to concentrate purely on beef production.

The breed actually originated around 1600 in the Tees River Valley of northern England. Because breeders from the County of Durham played a big role in their development, Shorthorns often have been referred to as "Durhams."

The coloring always has been red, white, and a mixture of the two, called roan. Early breeders left a great heritage by developing animals with lots of size, wide backs, and deep quarters.

In 1730, Shorthorns were introduced into Scotland. Here, a great many improvements were made. While English breeders continued to breed for dual purposes—meat and milk—the Scotsmen worked toward beef conformation. Rugged terrain and a cold, damp climate also led to the development of a hardier breed.

After the introduction to America, Shorthorns followed the pioneer wagon trains westward into the short-grass country. They were used to grade up herds of longhorn cattle as they went. In 1846, the first American Herd book was published, and in 1882 the American Shorthorn Breeders' Association was formed. The last half of the Nineteenth Century saw hundreds of Shorthorns come to America, many through settler-formed importing companies.

Polled Shorthorns, a truly American breed, originated in the Midwestern states in the 1870's. Breeders discovered that the naturally hornless cattle, that occurred from time to time in horned herds, carried a dominant characteristic. Polled Shorthorns now comprise more than one-fourth the annual registrations of the American Shorthorn Breeders' Association.

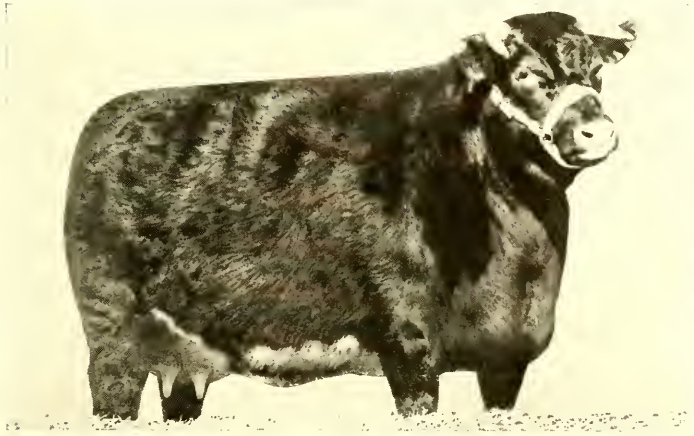
So great has been the improvement of Shorthorns in the United States that some have been sent back to Scotland, and exports have been particularly strong to Australia and South America in recent years.

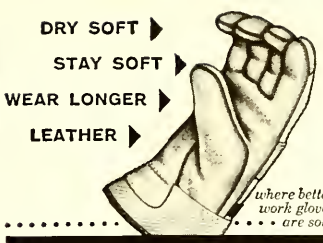
An excellent weight-for-age gaining ability is highly prized. Early maturity is partly credited to a plentiful milk supply, for which the breed is noted.

Today there are more Shorthorn cattle on earth than any other breed, according to the American Shorthorn Breeders' Association, located in the Livestock Exchange Building at Omaha, Nebraska. You can write to that address if you desire more information on this important breed of cattle.

The ideal Type Shorthorn Female

(Photo by J. F. Abernathy Livestock Photo Co.)





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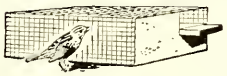

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The First One Doesn't Have A Chance!

"Apparently you've forgotten this is Saturday . . . no school!"

The following correction appeared in a small town paper: *"Our paper carried the notice last week that Mr. John Jones is a defective in the police force. This was a typographical error. Mr. Jones is really a detective in the police farce."*

Harold Wilkins
Dobson, North Carolina

An old mountaineer and his son were sitting in front of the fire smoking their pipes, crossing and uncrossing their legs. After a long period of silence, the Father said, *"Son, step outside and see if it is raining."*

Without looking up, the son said, *"Ah, Pa, why don't we jest call in the dog and see if he is wet?"*

James Kinard
Moultrie, Georgia

First Mosquito: *"Why are you making such a fuss?"*
Second Mosquito: *"Whoopee, I passed the screen test."*

Helen Cogburn
Norman, Arkansas

Seen in the personal ads of a rural weekly paper: *"Anyone found near my chicken house at night will be found still there next morning."*

Roger Small
Pittsville, Wisconsin

Jones: *"Was your garden a success last year?"*
Brown: *"I'll say it was! It enabled my next door neighbor's chickens to take first prize at the State Fair."*

Henry Sherrer, Jr.
Bay City, Texas

The honeymoon is over when he phones to say he'll be late to dinner—and she's already left a note that it's in the oven.

Dwight McNew
Mount Vernon, Kentucky

A troop of Boy Scouts was being used as victims in a civil defense test. One scout was supposed to lie on the ground and await his rescuers, but the first-aid workers got behind schedule with their work, and he lay "wounded" for hours. When the first-aid men finally arrived at the place where the casualty was supposed to be, they found nothing but a written note: *"Have bled to death and gone home."*

Larry Ray
Lewisburg, Tennessee

Ad in newspaper: *White angora kitten—will do light mousework.*

Eugene Van Horn
Turtle Lake, North Dakota

Two mountaineers watched a big Cadillac go by. A short time later, a small foreign car followed it. One fellow looked at the other and said, *"I'll be durned—that thar thing's got a colt."*

William Sheppard
Denver, North Carolina

Army barber to recruit: *"Want your sideburns?"*
Recruit: *"Yes."*
Barber: *"Catch."*

Jim Manbeck
New Knoxville, Ohio

"Man, I've got so many troubles that if anything happens to me today, it'll be at least two weeks before I can worry about it!"

Albert Snyder
Eldorado, Ohio

"See, it doesn't hurt! Now the doctor will do it to you."

The professor of English was trying to drum into his class the importance of a large vocabulary.

"I assure you," he said, *"if you repeat a word 10 or 12 times, it will be yours forever."*

In the back of the room a cute co-ed took a deep breath, closed her eyes and whispered, *"Harry, Harry, Harry . . . "*

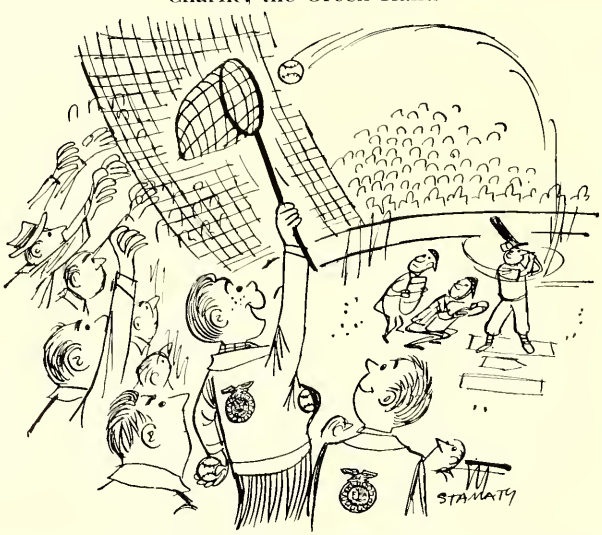
Janna Beth Sapp
Miami, Oklahoma

Patient: *"Doctor, my head is like a lump of lead, my neck is stiff as a pipe, and my muscles contract like bands of iron."*

Doctor: *"I believe you'd better consult your hardware dealer."*

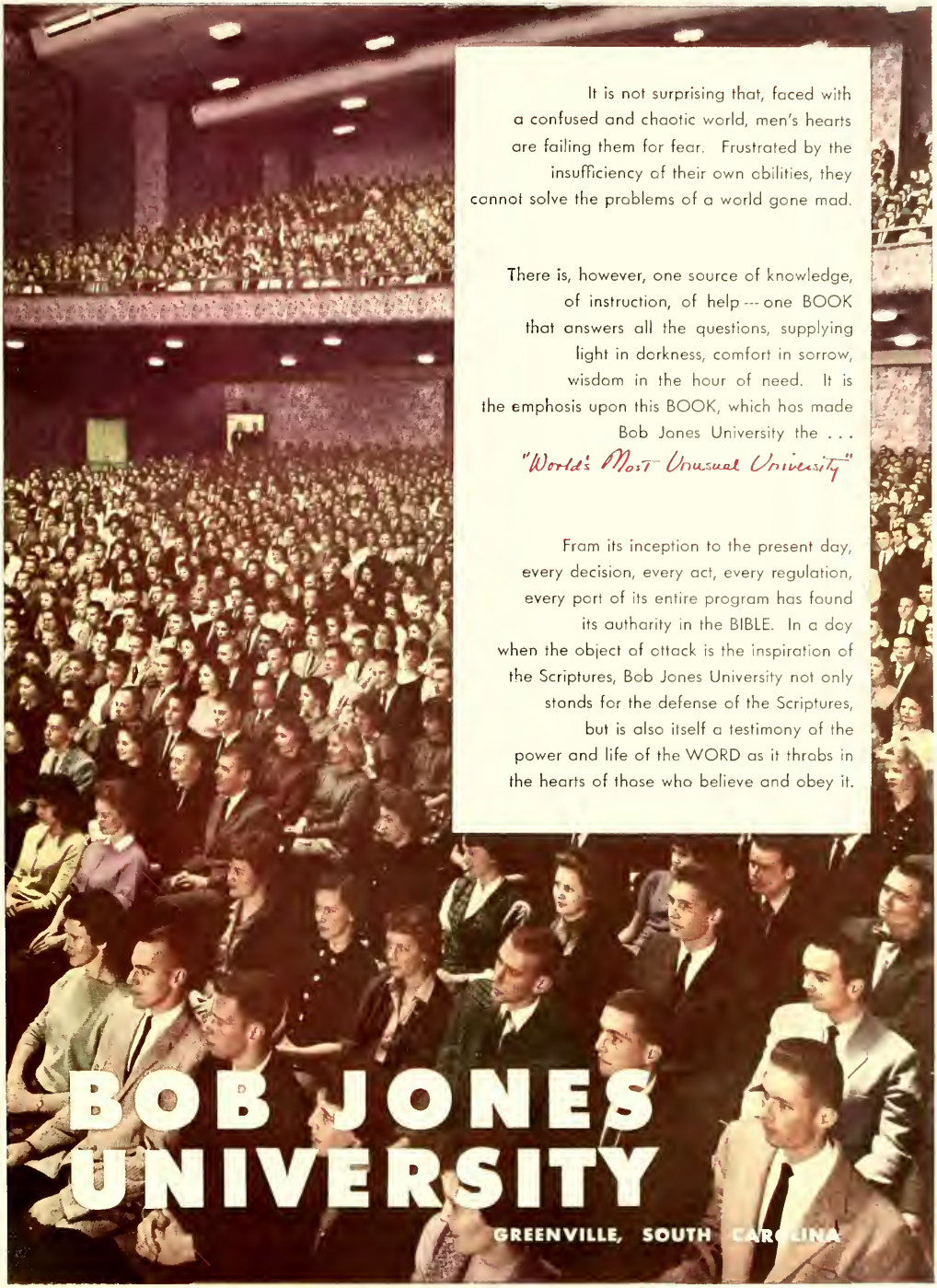
Gail Lambert
Friendship, Tennessee

Charlie, the Green Hand



"I'm glad we postponed our fishing trip!"

The National FUTURE FARMER *will pay $1 for each joke published on this page. Jokes must be submitted on post cards addressed to The National* FUTURE FARMER, *Box 29, Alexandria, Virginia. In case of duplication, payment will be made for the first one received. Contributions cannot be acknowledged or returned.*



It is not surprising that, faced with a confused and chaotic world, men's hearts are failing them for fear. Frustrated by the insufficiency of their own abilities, they cannot solve the problems of a world gone mad.

There is, however, one source of knowledge, of instruction, of help --- one BOOK that answers all the questions, supplying light in darkness, comfort in sorrow, wisdom in the hour of need. It is the emphasis upon this BOOK, which has made Bob Jones University the . . .

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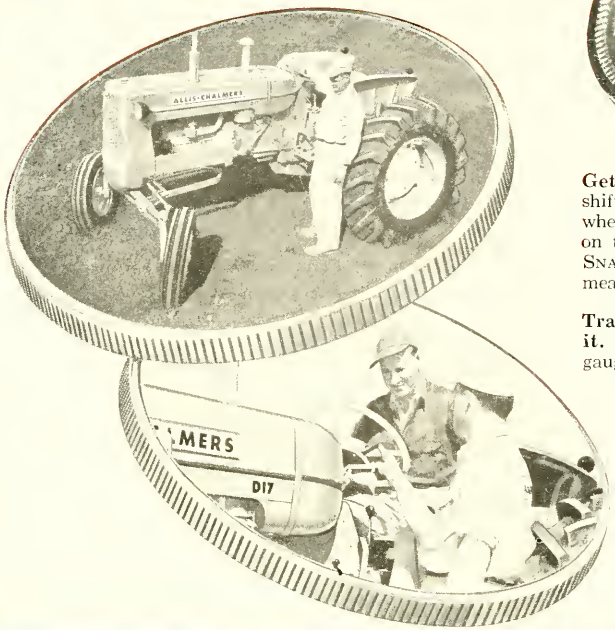
BOB JONES UNIVERSITY

GREENVILLE, SOUTH CAROLINA

How to squeeze more Dollars out of each tractor day



Get-ready time — minutes quick. Roll-shift front axle — as well as power-shift rear wheels — saves time and muscle. Then latch on to the implement quickly with 3-point or SNAP-COUPLER hitch. Less get-ready time means more dollar-earning field time.

Traction that's always on tap as you need it. Set the lever and, as the load changes, the gauge tells you what your TRACTION BOOSTER system is doing — with pull-type as well as mounted implements. You get the continuous ground grip that keeps tractor earnings piling up, not slipping away.

Power control that makes the most of both horsepower and time. With Power Director lever, the tractor ground speed can be matched to the load or condition with on-the-go shifting between high and low range — stepping up pull power as much as 42 percent in low range, increasing speed up to 42 percent in high range. Power Director also provides live PTO.

ALLIS-CHALMERS, FARM EQUIPMENT DIVISION, MILWAUKEE 1, WISCONSIN

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